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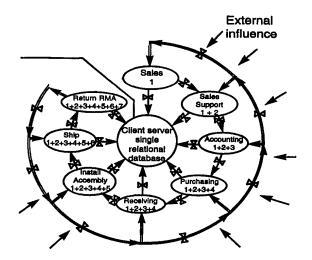
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(54) Title: INTEGRATED BUSINESS-TO-BUSINESS WEB COMMERCE AND BUSINESS AUTOMATION SYSTEM



#### (57) Abstract

The present invention, generally speaking, provides software that enables end-to-end, business-to-business Web commerce (Web business, or e-business) and that automates to the greatest degree possible, in a unified and synergistic fashion and using best proven business practices, the various aspects of running a successful and profitable business. Web business and business automation are both greatly facilitated using a computing model based on a single integrated database management system (DBMS) with intrinsic data synchronization that is either Web-enabled or provided with a Web front-end. The Web provides a window into a "seamless" end-to-end internal business process. The effect of such integration on the business cycle is profound, allowing the sale of virtually anything in a transactional context (goods, services, insurance, subscriptions, etc.) to be drastically streamlined.

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# INTEGRATED BUSINESS-TO-BUSINESS WEB COMMERCE AND BUSINESS AUTOMATION SYSTEM

#### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The present invention relates to business-to-business Web commerce and to business automation systems.

#### 2. State of the Art

Web commerce may be defined as the use of a computer network, such as the Internet, to do business, such as buy and sell products or services. Although Web commerce is still in its infancy, relatively speaking, Web commerce is predicted by some to soon become the dominant mode of business practice. Web commerce allows business to move much more quickly, without the burden and cost of paperwork.

Despite the promise of Web commerce, current Web commerce software is typically of very limited capability. Most Web commerce is consumer-oriented rather than business-oriented. The tacit assumption is that the purpose of the Internet should be to enrich people's personal lives more than to enable business to move at light speed. Furthermore, typically each transaction is treated in isolation. No on-going course of business is assumed or facilitated.

Material management functions such as procurement represent a substantial expense and burden for medium and large businesses. Purchases are typically subject to approval at multiple levels. In the case of the purchase of a computer, for example, an employee might submit a purchase request to the employee's supervisor, who might approve the request and forward it to the MIS (Management Information Systems) department, which might approve the request and forward it to accounting for budgetary approval. The real cost of such a process is estimated to be as much as \$100 per purchase request. Furthermore, the time required for such a process to be completed may be weeks or months. In the meantime, productivity may suffer.

Purchasing, moreover, is only part of the larger problem of material management. Once materials have been procured, typically they must be tagged, tracked and accounted for, both physically and in accounting terms such as depreciation, etc. The latter activities may either be conducted in an organized fashion, often at considerable expense, or haphazardly, with marginal effectiveness.

Existing Web commerce software is likewise fraught with problems for the selling company. When an order 's placed through the Web, it typically results in a fax or email, information from which must be manually entered into an internal sales system that may or may not be linked to other closed systems such as accounting, human resources, purchasing, assembly, etc. Even if these various systems are linked in some fashion, such linking is fixed, not responsive to change. Hence, once an entry is made, depending on the degree of automation, additional manual intervention may be required to achieve the desired final result, e.g., ship a product to a customer. The purchaser is typically unable to determine the status of an order without placing a call or sending an email. Moreover, order fulfillment is again only a part of the larger problem of total customer satisfaction (which is in turn only a part of the larger problem of running a successful, profitable business). Returns are bound to occur and must typically be handled manually, typically by a Return Merchandise Authorization (RMA) or traffic department. Also, some fraction of shipments are bound to be lost, damaged or mis-shipped. Related insurance claims typically must also be handled manually both by the traffic and accounting departments. Even though the foregoing activities are closely related functionally, the mechanisms for handling these activities, whether manual or automated, are often ad hoc, because of the unanticipated, non-routine, but inevitable nature of such events.

On a business-wide scale, the same is largely true: the various activities of the business, while they may be separately automated, are not automated in a unified, synergistic fashion. Automation is typically performed by automating, testing

and implementing fixed, linear work flows for a fixed environment, resulting in systems that are not adaptable to the real, changing business environment. Most often, different departments each have separate database systems with the departments being linked by a local- or wide-area network. A person in one department obtains information from a different department by sending an email and requesting a report. Referring more particularly to Figure 1, in accordance with a typica! model of business automation, various departments (e.g., sales, sales support, customer service, accounting, purchasing, receiving, engineering, assembly, shipping) are separately automated but linked together by a computer network (e.g. LAN, WAN). Each department interfaces to multiple different departments in an essentially manual fashion but using modern electronic communications tools—phone, fax, email, computer hardcopy, etc. Comparison of the resulting overall business process to a Rube Goldberg invention is apt, if mildly exaggerated. The process entails repeated transmission of duplicate information to different departments and repeated transmission of additional information and instructions to different departments on an as-needed basis. The party transmitting the information controls the amount and quality of information conveyed. The party receiving the information has no control over the information or the quality of the instructions received but rather is entirely dependent on the party transmitting the information. Duplication occurs both within departments and between departments. An external influence to the system (a call from a customer or vendor, a new customer account, a ruffled employee) can and often does cause a flurry of activities, but often produces less-than-commensurate positive results because of the inherent inefficiency of the system. The process, because it is ill-defined, is not easily reversible when an error has been made. In most systems, mistakes must be propagated to the end of a work flow before reversal can occur.

The foregoing model results in the fragmentation of information— "the right hand does not know what the left hand is doing." Information is transported

from one place to another, either in hardcopy form, necessitating re-entry, or in such electronic form as to require substantial massaging, and with substantial latency such that by the time the information is to be used it is already outdated. A business executive, for lack of readily-available, accurate, verifiable information in usable form, must then rely heavily on subordinates to obtain a picture (hopefully accurate) of what is happening inside the company. Considerably employee time may be spent gathering historical data to satisfy the need for management information. The same factors that hamper management performance may also cause performance at lower levels within the company to suffer. Employees may lack timely information regarding critical tasks that need to be performed. For lack of timely information regarding returns, for example, or some other aspects of operations, accounting personnel may pay invoices that should in fact not be paid.

The lack of readily-available, verifiable information in usable form is most pronounced in relation to financial information. In the case of a sales company doing a substantial volume of business, for example, preparation of a state sales tax return may take ten man-days or more. An audit may take a similar amount of preparation. Closing the books on an accounting period is itself an arduous task. The time requirements and challenges posed by month-end and year-end closings are all-too-familiar to virtually all in-house accountants. Despite these heroics, the inherent latency of the process diminishes the value of the results. A finalized June statement, for example, might be received at the end of July or the beginning of August, hampering the ability to react quickly to changing business conditions. A real-time financial statement is non-existent.

For lack of readily-available, verifiable information in usable form, employee evaluation is often performed more on the basis of perception than objective reality. The appearance of performance then becomes at least as important as real performance. Employee performance and employee morale may suffer as a result.

Numerous "high-power" database application software packages exist in the marketplace, from such industry leaders as SAP, Peoplesoft, BAAN, and Oracle. The solutions of each of these vendors have strengths and weaknesses. SAP, for example, although strong in the area of fixed asset management and financials, does not provide flexible shipping and receiving functions. To automate these functions requires the use of separate software. Furthermore, Web integration is problematic. BAAN is strong in the a eas of shipping/receiving, manufacture and assembly, but is limited in the areas of fixed asset management and material handling. In particular, BAAN, SAP, etc. are bound by conventional notions of real inventory—an item must physically be in stock before it can be ordered (as contrasted with the concept of virtual inventory, explained more fully hereinafter). Peo, lesoft offers strong human relations functions but is not strong in "back-end" functions. Software packages from Peoplesoft and BAAN are therefore often linked together to provided a more complete solution. Similarly, software from SAP may be linked to software from BAAN. Oracle offers discrete modules for almost all of the functions offered by the other software packages. The modules must be linked together in a laborious process, however, with substantial duplication of data in all modules. None of these software packages have a Web-centric design, nor has any been used to successfully implement an automatic ene-to-end business process, even in large corporations having no lack of resources.

Web-centric "e-business solutions" are offered by Pandesic (Intel and SAP), Actra (Netscape) and other (typically early-stage) companies. In the case of Pandesic, early promotional materials indicate a distinct consumer orientation as opposed to business-to-business. A conventional real inventory model is followed in which product must be warehoused and on-hand in order to allow the product to be ordered. Furthermore, Web operations are segregated from non-Web operations, necessitating duplication. In the case of Actra, a portfolio of commerce software, including legacy application integration modules, are designed to "bridge

gaps between enterprises and applications," enabling business-to-business transactions, buyer-side and seller-side procurement, consumer on-line Internet storefronts, and commercial Internet publishing. This "gap-bridging" approach likewise entails substantial duplication.

Dell and Cisco each sells computer and networking equipment directly to consumers over the Web using configuration and order software developed by outside third parties. Business-to-business features, such as invoices, RMAs (particularly automatic "instant" RMAs) are lacking. The software does not provide an end-to-end Web-business solution.

The need for more powerful business solutions is especially apparent in the area of supply-chain management. Currently, demand information is forecast-based and propagates slowly through a supply chain through manual processes. The result is frequent oversupply and undersupply. The power of the Web has not yet been brought to bear on the supply-chain management problem.

A need therefore exists for software that enables end-to-end, business-to-business Web commerce and that automates to the greatest degree possible, in a unified and synergistic fashion, the various aspects of running a successful and profitable business. The present invention addresses this need.

#### SUMMARY OF THE INVENTION

The present invention, generally speaking, provides software that enables end-to-end, business-to-business Web commerce (Web business, or e-business) and that automates to the greatest degree possible, in a unified and synergistic fashion and using best proven business practices, the various aspects of running a successful and profitable business. Web business and business automation are both greatly facilitated using a computing model based on a single integrated database management system (DBMS) with intrinsic data synchronization that is either Web-enabled or provided with a Web front-end. The Web provides a window into a "seamless" end-to-end internal business process. The effect of such integration

on the business cycle is profound, allowing the sale of virtually anything in a transactional context (goods, services, insurance, subscriptions, etc.) to be drastically streamlined. In accordance with one aspect of the invention, business-to-business transaction processing using a database and a database management system is performed by receiving user demand information (or a user "wish list" or expression of interest interest in selected products) electronically; at least partially in response to receiving the user demand information electronically, automatically storing an order record in the database and maintaining the order record in the database throughout a life cycle of the order; and during the life cycle of the order, multiple users each accessing the order record and processing the order to accomplish a respective one of multiple business functions, and creating records related to the order. The life cycle of the order includes an expected period for at least one of reversal, service, and parts order, where reversal includes customer returns, canncellation and correction of improperly fulfilled or mistaken orders, including employee mistakes. The business software provides a Web-based, business-tobusiness electronic commerce framework that uses the Web as a medium for all parties involved in a transaction (customer, supplier, manufacturer, etc.) within multiple supply-chain tiers to receive up-to-the minute synchronized transaction information relating to any and all facets of the transaction. Information may be disseminated by push (Web broadcast) or pull methods, with a business user exercising information access control.

In the case of a just-in-time product reseller, for example, the business soft-ware operates as follows. A comprehensive product list is updated electronically in real time or at regular intervals from various sources (e.g., by file download, over the Web, or from CD or floppy distributions or other media or even manual input). A graphical Web interface allows a user to obtain a quote based on the product list. The quote is assigned a quote number and saved in the DBMS and may be retrieved and viewed at a later date. Based on the quote, a user with appropriate

Web-verifiable authority may place an order on behalf of a company in accordance with a pre-existing Web-enforceable agreement with the company. An employee of the seller, using the same DBMS, purchases product to fill the order. When the product is received, information regarding receipt of the product is entered into the DBMS. Orders are assembled, shipped and billed, all using the same DBMS. Customers can retrieve previous quote records and view order and shipment status via the Web. Customer invoices are automatically generated upon shipment but may be modified if necessary by a supervisory user having the requisite authority. When a customer payment is received, details concerning the payment are entered into the DBMS. Vendor invoices and payments are also handled using the DBMS, and both customers and vendors can view payment status—invoice, credit (from returns), etc.—via the Web, allowing paper invoice copies to be dispensed with if desired. Returns are provided for and may be return of an entire piece of equipment or replacement of a warranted component part, and replacements may be electronically tracked. Parts tracking saves employee time that would otherwise be spent responding to customer inquiries, and also contributes to customer satisfaction through the convenient availability of timely information.

Throughout the foregoing process, a period (e.g., off-peak or nightly) update process is performed in which consistency checks are performed and in which accounting information (including sales tax information) is collected, journal entries made, and general-ledger entries posted. When records are edited, they are flagged to be checked during the period update so that adjusting entries may be made if necessary. At any time, the update process may be run and an accounting period closed. Real-time, audit-ready financial information accurate up to the day or up to the hour is available within minutes at the touch of a button without the need for a highly-trained accountant. A novice can facilitate the systematic performance of many functions typically performed by accountants, with periodic review and supervision by an accountant.

Because the DBMS is Web-enabled, given the appropriate privileges, a complete up-to-the-minute view of every aspect of a business is available from anywhere in the world. Telecommuting is greatly facilitated, with its attendant cost savings. Furthermore, factual evaluation of employee performance, whether of a telecommuting employee or an office-based employee, is greatly facilitated by statistical analysis of accumulated historical performance data (tasks, projects, assignments, reports).

Driven by the goals of enabling widespread telecommuting and global cyberspace trading, the single database business process software provides parallel synchronized data access to all users. Users have access to all information given the proper access authority. The system provides built-in assurance of prioritized dynamic workflow and best business practice (the optimum known way that a business process should flow) based on self-correcting business knowledge algorithms. The system draws upon a knowledge base to prevent mistakes anticipated by the software designer as well as mistakes that have occurred in the past and have been corrected for by adding to the knowledge base, which is continually accumulating. The dynamic workflow assures that whatever mistakes may occur are discovered at various stages. The system lists and prioritizes uncompleted work that needs to be followed up. All user activities are tracked, and users are held accountable. Every activity performed by users are tracked statistically. Problem sources may therefore be identified. Precision training and factual performance review are made possible, significantly empowering users in their assignments.

The software provides for business scalability (as opposed to mere data processing scalability), minimizing the growing pains experienced by rapidly growing companies. In growing companies, as the responsibility for a process becomes divided among more and more people, becoming more and more diffuse, communication between group members becomes more and more difficult and the

process becomes increasing difficult to manage. The present invention, with dynamic workflow, makes workflow and work quality substantially immune to changes in the number of employees and the experience level of employees. Work discipline and organization is enforced by, and teamwork and communication between users facilitated by, the database. The ease of use of the database system arising from dynamic workflow and the knowledge base incorporated within the system minimizes the need for extensive employee training and allows for flexible employee roles. Business scalability also entails dramatically increased productivity through automated computer assistance, allowing business growth to greatly outstrip personnel growth. One example of business scalability is in the area of purchasing. Orders are grouped for purposes of purchasing such that the number of purchase orders to vendors does not increase as the number of orders received.

Conceptually, the invention allows for the integration and time-scale compression of what have heretofore been largely independent, human-dependent business processes. Business processes have typically been organized into separate business domains, chiefly including a products domain (e.g., engineering, manufacturing, purchasing, shipping, receiving, returns), a payments domain (e.g., accounts receivable, accounts payable), a financial performance domain (e.g., employee evaluation). In accordance with one aspect of the invention, files for the automation of these various business domains are integrated as part of a single database schema within a single database management system run on one or multiple servers. There results a very tight integration of the foregoing activities and other derivatives of those activities such as product forecasting and cash-flow analysis. In particular, a universal financial report and trend report generator provides for general single or multiple General Ledger (GL) account code analysis including sales, cash flow and material.

Time-scale compression of the resulting integrated business automation

process is achieved in two ways. First, the single database management system is Web-enabled, providing access anytime, anywhere. Second, triggers within the single database management system propagate activity from one business domain to a succeeding business domain (e.g., from shipping in the products domain to accounts payable in the payments domain) without duplication of human efforts. Data can only be entered once and is not ordinarily allowed to be changed or reentered. Data entry is guided by a built-in best-practice knowledge base.

The integrated business automation process may be easily modularized if desired by restricting access to only files belonging to selected business domains. Hence, unlike conventional business automation suites that provide separate software modules that may be acquired separately and linked together (with sustantial data duplication), in the case of the present integrated business automation process, a customer receives everything but may only pay for be given access to a subset of files—e.g. AP/AR files. Later the customer may decide to pay for added capabilities. Such a change in capabilities may be readily administered remotely through the Web. In this manner, the customer is able to "pick and choose" the capabilities that the customer wants to use.

An outside Web user may also pick and choose the capabilities that the user wants to use. For example, orders may be placed by phone or fax but tracked via the Web. Or a user may use the Web only to check the amount owed on open invoices. Others user may use the Web from start to finish, to order products, track orders, track payments, etc.

Extensive measures are taken to ensure that the integrated business process is, to the greatest extent possible, error-free. Only a limited number of controlled entry points to the system are provided. At each entry point, entry validation is performed at the time of entry. Because the business process is integrated, validation may be more extensive and hence more effective than in typical systems. A periodic update process is also performed is which checks are made, including cross-

checks between records of files belonging to different business domains. The system is in effect a closed system where all entries must balance appropriately. The nightly update is able to catch and flag errors (or possible errors) that may have occurred despite entry validation, including hardware or system errors, software bugs, and human errors. As errors become apparent that have escaped detection by the system, the foregoing mechanisms may be readily revised to prevent future such occurrences. Programmed process intelligence therefore continually increases as errors are detected, flagged, and trouble-shooted so as to add to the wealth of the knowledge base and improve the process methodology. At the same time, dynamic workflow makes possible the re-navigation of existing workflow components.

The integrated processes also automates returns and credits both on the customer side and the vendor side. Returns and credits may be necessitated by user errors that go undetected by the system, by overcharges for freight, or numerous other circumstances. Returns are only one important example of what is more generally a reversal process, or catch-all, for mistakes during work-in-progress and for post-sale activity. Return requests, Return Merchandise Authorizations, credit memos and accounting adjustments may all be handled electronically.

### BRIEF DESCRIPTION OF THE DRAWING

The present invention may be further understood from the following description in conjunction with the appended drawing. In the drawing:

Figure 1 is a block diagram illustrating conceptually a conventional business process;

Figure 2 is a block diagram illustrating conceptually an automated business process in accordance with the present invention;

Figure 3 is a generalized block diagram of a system for business-to-business Web commerce in accordance with an exemplary embodiment of the invention;

Figure 4 is an illustration of a starting Web screen display;

Figure 5 is an illustration of a first product categories screen display;

Figure 6 is an illustration of a further product categories screen display;

Figure 7 is an illustration of still a further product categories screen display;

Figure 8 is an illustration of a screen display displaying printer cables;

Figure 9 is an illustration of a shopping basket screen display;

Figure 10 is an illustration of a screen display allowing the user to search for products by manufacturer;

Figure 11 is an illustration of a multi-search screen display;

Figure 12 is an illustration of a core products search screen display;

Figure 13 is an illustration of a core products search results screen display;

Figure 14 is an illustration of a Products Search /PID screen display;

Figure 15 is an illustration of a PID search results screen display;

Figure 16 is an illustration of a PID screen display;

Figure 17 is an illustration of a Products Search/APL screen display;

Figure 18 is an illustration of a Products Search/Previous Quotes screen display;

Figure 19 is an illustration of a quotes search results screen display;

Figure 20 is an illustration of a quote screen display;

Figure 21 is an illustration of a PID maintenance screen display;

Figure 22 is an illustration of an active PIDs screen display;

Figure 23 is an illustration of an APL maintenance screen display:

Figure 24 is a company APL maintenance screen display;

Figure 25 is an illustration of a return request screen display;

Figure 26 is an illustration of an RMA multi-search screen display;

Figure 27 is an illustration of an RMA search results screen display;

Figure 28 is an illustration of an RMA record screen display;

- Figure 29 is an illustration of a tracking screen display;
- Figure 30 is an illustration of a sales order status screen display;
- Figure 31 is an illustration of a sales order search results screen display;
- Figure 32 is an illustration of a Tracking—Return Product and Service Part Status screen display;
- Figure 33 is an RMA status search results screen display;
- Figure 34 is an illustration of a more detailed RMA status screen display;
- Figure 35 is an illustration of a Tracking—Product Purchase History screen display;
- Figure 36 is an illustration of a Tracking—Product Return History screen display;
- Figure 37 is an illustration of a return history search results screen display displaying search results;
- Figure 38 is an illustration of a Reports screen display;
- Figure 39 is an illustration of a Back Order Reports screen display;
- Figure 40 is an illustration of a Monthly Sales Reports screen display;
- Figure 41 is an illustration of a resulting search results screen display,
- Figure 42 is an illustration of a Packing Slips screen display;
- Figure 43 is an illustration of a resulting search results screen display;
- Figure 44 is an illustration of a packing slip screen display displaying a selected packing slip;
- Figure 45 is an illustration detailing the authority of various internal users with respect to security parameters in accordance with an exemplary embodiment;
- Figure 46 is a diagram of a typical lineage (authority) tree;
- Figure 47 is an illustration of a database customer screen display;
- Figure 48 is an illustration of a company price list screen display;
- Figure 49 is an illustration of one of a series of dialogs used to set Web authority for an employee of a customer;
- Figure 50 is an illustration of another of a series of dialogs used to set Web

authority for an employee of a customer;

Figure 51 is an illustration of another of a series of dialogs used to set Web authority for an employee of a customer;

Figure 52 is an illustration of another of a series of dialogs used to set Web authority for an employee of a customer;

Figure 53 is an illustration of another of a series of dialogs used to set Web authority for an employee of a customer;

Figure 54 is an illustration of a dialog used to confirm employee information at the conclusion of Web authorization:

Figure 55 is an illustration of the corresponding screen display as shown in Figure 48, following Web authorization;

Figure 56 is a block diagram of a conventional Web commerce computer architecture in which different functions are automated on different computing platforms, necessitating multiple interfaces:

Figure 57 is a block diagram of the present Web commerce computer architecture in which all functions are automated on a single Web-enabled database, necessitating only a single interface;

Figure 58 is an illustration of a partial database schema of one implementation of the system of Figure 3, showing primary files and relationships;

Figure 59 is a block diagram illustrating an automated business process in accordance with an exemplary embodiment of the invention;

Figure 60 is an illustration of a Sales-MWS screen display;

Figure 61 is an illustration of a Quote screen display;

Figure 62 is an illustration of a Products screen display;

Figure 63 is an illustration of a MWS screen display:

Figure 64 is an illustration of a Purchasing view of a PRIS (Purchasing/Shipping/Receiving/Installation) screen display;

Figure 65 is an illustration of a Receiving view of the PRIS screen display;

Figure 66 is an illustration of an Installation view of the PRIS screen display;

Figure 67 is an illustration of a Shipping view of the PRIS screen display;

Figure 68 is an illustration of a PRIS Item Detail screen display;

Figure 69 is an illustration of an Expedite view of the PRIS screen display;

Figure 70 is an illustration of an Ordered Not Received screen display;

Figure 71 is an illustration of a Received Not Shipped screen display;

Figure 72 is an illustration of an Expedite pop-up, allowing expedite status to be set from a MWS screen display;

Figure 73 is an illustration of an RMA screen display;

Figure 74 is an illustration of an Add RMA screen display used to initially create an RMA;

Figure 75 is an illustration of an RMA add records screen display used to add information to an RMA;

Figure 76 is an illustration of an RMA Automatic Request Completion file;

Figure 77 is an illustration of an RMA Automatic Approval Limit file;

Figure 78 is an illustration of a Customer RMA Automatic Approval file;

Figure 79 is an illustration of a Vendor RMA Automatic Approval file;

Figure 80 is an illustration of a Manufacturer RMA Automatic Approval file:

Figure 81 is an illustration of a Web page used to automatically provide a customer with an RMA number in accordance with the foregoing automatic approval process;

Figure 82 is an illustration of a Sales Tax Register screen display, including formulas used to calculate figures to be entered within each line of a sales tax return;

Figure 83 is an illustration of a Customer Invoices screen display:

Figure 84 is an illustration of the Customer Invoices screen display showing collections information within a pop-up window;

Figure 85 is an illustration of the Customer Invoices screen display showing collections information by customer within a pop-up window;

Figure 86 is an illustration of a Customer Payments screen display;

Figure 87 is an illustration of an OverUnderPay screen display:

Figure 88 is an illustration of an OverUnderPay details screen display;

Figure 89 is an illustration of a Vendor Invoices screen display;

Figure 90 is an illustration of an AP Add Invoices screen display;

Figure 91 is an illustration of a Vendor Invoice display;

Figure 92 is an illustration of a Daily Vendor Verification screen display;

Figure 93 is an illustration of a Vendor Payment Register screen display;

Figure 94 is an illustration of an Add Invoices screen display having superimposed thereon a dialog window used to enter the period for a freight bill;

Figure 95 is an illustration of an Accounting Setup defaults screen display;

Figure 96 is an illustration of a display screen used to add an account to a Chart of Accounts file:

Figure 97 is an illustration of a Chart of Accounts screen display;

Figure 98 is an illustration of a Chart of Accounts—Account Detail screen display;

Figure 99 is an illustration of an Accounts Receivable Customer Setup screen display;

Figure 100 is an illustration of an Accounts Receivable screen display;

Figure 101 is an illustration of an Accounts Receivable—Account Detail screen display;

Figure 102 is an illustration of an Accounts Payable Partner Setup screen display;

Figure 103 is an illustration of an Accounts Payable screen display:

Figure 104 is an illustration of an Accounts Payable—Account Detail screen display;

Figure 105 is an illustration of an account distribution pop-up screen used to allocate an invoice amount between different accounts;

Figure 106 is an illustration of a General Journal output screen display;

Figure 107 is an illustration of General Journal input screen display;

Figure 108 is an illustration of a screen display used for financial report definition:

Figure 109 is an illustration of a resulting financial report;

Figure 110 is an illustration of a screen display used for trend report definition;

Figure 111 is an illustration of screen display including a dialog used to select trend frequency;

Figure 112 is an illustration of screen display including a window in which trend report data are displayed;

Figure 113 is an illustration of a trend report graph screen display;

Figure 114 is a block diagram of a human resource infrastructure for a virtual organization performance evaluation model;

Figure 115 is an illustration showing in greater detail portions of the human resource infrastructure of Figure 114;

Figure 116 is an illustration of a file structure used to track all performance metrics of interest;

Figure 117 is an illustration showing in greater detail the Factual Measurement Review process of Figure 115;

Figure 118 is an illustration of a seris of selection menus used to select an employee for whom a factual employee evaluation report is to be displayed;

Figure 119 is an illustration of screen displays used to display factual performance analysis results in accordance with an exemplary embodiment of the invention;

Figure 120 is an expanded view of the multiple period screen display of Figure 119;

Figure 121 is an illustration of a dialog displayed as a result of qualification of user inputs during the course of adding invoices;

Figure 122 is an illustration of a further dialog of a similar type as that of Figure 121;

Figure 123 is an illustration of yet a further dialog of a similar type as that of Figure 121;

Figure 124 is a partial illustration of a pop-up menu of options available during vendor invoice display;

Figure 125 is a partial illustration of a pop-up menu of options available during vendor invoice display, showing options not shown in Figure 124;

Figure 126 is an illustration of a pop-up menu of options available during customer invoice display;

Figure 127 is an illustration of a pop-up menu of options available during

display of items sold;

Figure 128 is an illustration of a pop-up menu of options available during display of sales records;

Figure 129 is a block diagram illustrating a knowledge base, the expression of the knowledge base in screen displays of the present system, and a manner in which the knowledge base is increased;

Figure 130 is an illustration of an RMA Reports screen display;

Figure 131 is an illustration of an RMAs pending approval screen display;

Figure 132 is an illustration of an open RMAs screen display;

Figure 133 is an illustration of a Shipping Reports screen display;

Figure 134 is an illustration of a summary shipping report screen display;

Figure 135 is an illustration of a detailed shipping report screen display;

Figure 136 is an illustration of a POD screen display;

Figure 137 is an illustration of an Accounting Reports screen display;

Figure 138 is an illustration of a date-range-limited accounting report screen display;

Figure 139 is an illustration of an invoice screen display;

Figure 140 is an illustration of a multiple invoice search screen display;

Figure 141 is an illustration of a customer collections screen display, showing a Get Problems dialog;

Figure 142 is an illustration of the customer collections screen display showing a Searches pick box;

Figure 143 is an illustration of the customer collections screen display showing a Select Problem dialog;

Figure 144 is an illustration of the customer collections screen display showing a Select Tickler dialog;

Figure 145 is an illustration of a purchasing output screen display;

Figure 146 is an illustration of an expediting output screen display;

Figure 147 is an illustration of a receiving output screen display;

Figure 148 is an illustration of an installation output screen display;

Figure 149 is an illustration of a shipping output screen display;

Figure 150 is a flow diagram illustrating a percolation process for purchasing;

Figure 151 is a flow diagram illustrating a percolation process for receiving;

Figure 152 is a flow diagram illustrating a percolation process for shipping;

Figure 153 is a flow diagram illustrating a percolation process for installation/assembly;

Figure 154 is a flow diagram illustrating supply chain integration/management features of the present invention;

Figure 155 is a diagram of a first electronic template for specifying a customized business relationship;

Figure 156 is a diagram of a second electronic template for specifying a customized business relationship;

Figure 157 is a block diagram of a client/server business automation system in which a common database supports both end-to-end business process automation and sales force automation:

Figure 158 is a more detailed representation of sales force automation capabilities of the the system of Figure 157;

Figure 159 is a detailed listing of RMA types and sub-types;

Figure 160 is an illustration of a screen display showing customer-specific automatic RMA approval criteria; and

Figure 161 is an illustration of a Sales Force Automation screen display.

# DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS Architecture

Referring now to Figure 2, the present automated business process may be imagined as a kind of information assembly line. A first system user, or "information worker," having for example a Sales assignment or activity focus, initiates an automated, end-to-end business process by entering information into a client/ server single relational database, which forms a common hub of the automated business process. The user's entry is qualified, or "quality checked," as repre-

sented by a checkvalve. Such qualification is "experiential," i.e., derived from actual business experience, and differs qualitatively from the type of data validation typically performed in database systems. If the user's entry fails scrutiny by the system, it cannot be committed to the database. Similarly, the business process cannot continue to the next user. As a result in part of such experiential qualification, verifiable and usable management and enterprise information may be made readily available.

In the case of conventional systems, by contrast, a team of software engineers write an application based on input from groups of users from different departments to produce a definitive, linear workflow. The users, however, cannot anticipate the need for various features prior to using the software. Furthermore, the conception of the programmers may often differ significantly from that of the users. The result often leaves much to be desired. In SAP, BAAN, and other database systems, exceptions to the workflow must all be programmed. Updates are delayed until the next version of the software, at which point the same cycle repeats. Meanwhile, users suffer. Furthermore, because different users have different concerns, little consideration is given to the up-stream and down-stream effects of different user's actions. There results a "disconnect" between the behavior of the system and day-to-day real-world needs.

In the present system, navigation of the workflow is soley determined byt he access authority of the user. Workflow components are all pre-existing and pre-programmed. User inputs to the system, however, do undergo a qualification process. Qualification of user inputs has multiple facets. First, each user is accorded limited access privileges. An authority check is therefore performed to ensure that the user is authorized to make the entry being attempted. Second, the entry is checked in accordance with business rules that embody best practice as determined from an analysis of expected parameters and how various values of those parameters affect possible outcomes downstream. Thirdly, entries, even after then are

committed to the database, are subjected to intelligent consistency checks in order to detect discrepancies and provide feedback to allow for correction. If input qualification is successful, then succeeding events in the sequential business process are triggered.

Each worker in turn builds upon the information base established by preceding workers, and each workers entries are rigorously qualified. For example, following sales, process flow may continue to Sales Support, Accounting, Purchasing, Receiving, Assembly, and Shipping.

During the process external influences occur. An external influence may be a communication from a customer or vendor, for example, to either convey information or to view information stored in the central database. An example of an external influence might be a vendor special rebate. Information may be conveyed by electronic means (e.g., Internet, intranet, EDI, satellite, remote terminal direct-dial), human-mediated telecommunications (e.g., email, phone, fax), or by physical means (letter, visit, etc.).

As compared with the conventional business process of Figure 1, the circular automated business process of Figure 2 revolves around a single integrated database that accumulates information regarding every important activity of every user and defines a non-repetitive process. Furthermore, as compared to the essentially non-reversible process of Figure 1, the process of Figure 2 is reversible. As seen in Figure 2, following Shipping is a Return/RMA (Return Merchandise Authorization) activity, or, more generally, a reversal activity. This activity enables the forward process to be reversed, or backed out of step-by-step, as part of the overall automated business process.

The cumulative nature of the database of Figure 2 and the sequential nature of the business process enables incisive factual analysis in the areas of employee/ vendor performance and customer satisfaction, promoting fairness and personal responsibility. Whereas a human supervisor may effectively supervise only a lim-

ited number of employees, the database-implemented business methodology of Figure 2 provides for each employee what may be regarded as a "virtual mentor:" the user is guided during use of the system to prevent common mistakes (in fact, all mistakes made collectively by the all of the user's predecessors functioning in the same assignment), and the user's performance is continuously tracked and made accessible. Strengths and weaknesses in the employees performance may recommend certain changes in assignments—which changes may be made relatively easily by the employee because of the intuitiveness and intelligence of the system. An important aspect of virtual mentoring is an "open-book" information access policy: users, although they may limited access to input information, typically have few if any limits on access to information. The virtual mentoring process, described in greater detail hereinafter, promises to make the virtual office and telecommuting, with all its attendant advantages, a practical reality for a much wider segment of the workforce.

Referring now to Figure 3, a block diagram is shown of a computing environment in which the present invention may be used. A Web-enabled, client/server relational database management system (DBMS) is provided storing a database including files belonging to different business domains, e.g. a products domain, a payments domain, a financial performance domain and a personnel domain. (The term "product" is used generically herein to refer to items sold and may be tangible goods, financial products, subscriptions—anything that may be bought and sold in a discrete transaction.) Also provided are code modules pertaining to each of the different domains. Customers and vendors may obtain access to the database through the Internet or the like. The physical location of the database therefore becomes irrelevant—the database can be everywhere in the world, either through wired communications or wireless communications. A firewall (or other security scheme, such as encryption, implemented in either hardware or software) may be provided between the Internet and the Web interface of the DBMS. Internal clients

may be connected to the DBMS through a local area network (LAN) or through an intranet, using the Web interface.

#### Web User Interface

The Web interface to the database, particularly as seen by the customer, will presently be described in greater detail.

Referring now to Figure 4, within a principal navigation path a Web user is presented with buttons representing various options. In an exemplary embodiment, these options relate to, respectively, products, returns/repair, tracking, reports, accounting and log off. Two further options are also presented, PID maintenance and APL maintenance, the functions of which will be made clear hereafter.

In the example of Figure 4, the Products button is assumed to have been selected, resulting in the display of various search options. In the illustrated embodiment, Options 1-4 draw from an electronic products catalog directly. A product listing may be obtained by product category, all manufacturers (Option 1) or a single manufacturer (Option 2), or by manufacturer, description or part number (Options 3 and 4). Options 5-8 do not draw from the electronics products catalog directly but instead allow ordering to be performed without interacting directly with an electronic products catalog as described hereafter.

Selecting Option 1 causes a screen such as that of Figure 5 to be displayed, in which various product categories are displayed next to corresponding buttons. When the "Accessories & Supplies" button is selected, a screen such as that of Figure 6 is displayed, in which various sub-categories of products are displayed next to corresponding buttons. This division and sub-division may have any number of levels. In the illustrated embodiment, selection of the "Cables & Connectors" button causes a screen such as that of Figure 7 to be displayed, showing still a further level of sub-division. When the "Printer" button is selected, a screen such as that of Figure 8 is displayed, showing printer cables from the electronic product catalog. The user may check items of interest and click on "Show Selected Items,"

whereupon only the checked items are displayed. The user may search within the selection, reset (causing all of the items to again be displayed) or initiate a new search by clicking on corresponding buttons at the bottom of the page. For example, if the user checks the first item and clicks "Show Selected Items," a "shopping basket" screen such as that of Figure 9 is displayed. The user may return to the previous products list, search for more items, create a quote with the displayed items by entering a quantity for each item, or empty the shopping basket.

Selecting Option 2 from the product search page (Figure 4) causes a screen such as that of Figure 10 to be displayed. The user inputs a manufacturer's name, or clicks on a letter of the alphabet to choose from a list of manufacturers whose names begin with that letter.

Selecting Option 3 from the product search page (Figure 4) causes a screen such as that of Figure 11 to be displayed. The user inputs one or more of the following items of information: manufacturer, item description and manufacturer part number. Multiple part numbers may be entered and search simultaneously by clicking the "Search multiple products" button.

Selecting Option 4 from the product search page (Figure 4) causes a screen substantially similar to that of Figure 10 to be displayed.

Selecting Option 5 from the product search page (Figure 4) causes a screen such as that of Figure 12 to be displayed. This screen is similar to that of Figure 11. However, instead of merely searching the electronic catalog, the search identifies products that meet the criteria specified and that have previously been purchased on the user's account ("core products"). The search may be date limited. Alternatively, the user may choose to display all core products by clicking the corresponding button. Figure 13, for example, shows a list of core products resulting from the search criterion "Compaq."

Selecting Option 6 from the product search page (Figure 4) causes a screen such as that of Figure 14 to be displayed. Rather than purchase products item by

item, the present system allows the user to store groups of items that work together as pre-configured products, each identified by a user-assigned Product group ID (PID). The user may search for a specific PID or multiple specific PIDs, or the user may show all PIDs. An example of a screen display that results when the user clicks "Show all PIDs" is shown in Figure 15. PIDs may be regarded as a "favorite quotes" list that may be repeated reused by the user. An example of a PID is shown in Figure 16.

Selecting Option 7 from the product search page (Figure 4) causes a screen such as that of Figure 17 to be displayed. In addition to PIDs, the present system allows Approved Product Lists (APLs) to be stored, including both a company APL and a personal APL. The user may search an APL or show an APL in its entirety.

Selecting Option 8 from the product search page (Figure 4) causes a screen such as that of Figure 18 to be displayed. This option allows previous quotes to be found and displayed. The user may specify a particular quote by quote number or may display the quotes for the current day or the current week. The quote or quotes that are found are displayed within a screen display such as that of Figure 19. Selecting a quote and clicking "Show selected Quote" causes a screen such as that of Figure 20 to be displayed. Various actions may be taken with respect to the quote including: add/change/remove products; arrange the order of quote items; save the quote for future reference; place an order based on the quote; and duplicate the quote into a new quote. The user may also return to the last search results of the Products List.

PIDs and APLs may be maintained on-line by the user. Clicking on the PID Maintenance button within the screen of Figure 4 causes a screen such as that of Figure 21 to be displayed. The user may create a new PID or review existing PIDs. For example, clicking on the "Show PIDs currently Active" causes a screen such as that of Figure 22 to be displayed. The user may click on a PID number to view

the PID in detail.

Clicking on the APL Maintenance button within the screen of Figure 4 causes a screen such as that of Figure 23 to be displayed. The user then chooses between company APL and personal APL. Clicking on "Company APL," for example, causes a screen such as that of Figure 24 to be displayed. The user may add or delete an item to or from the APL by manufacturer part number or take any of various action with respect to the APL, including: search for products to add to the APL; delete items from the APL; end APL maintenance; and sort APL items by part number, manufacturer, price or description.

Clicking on the Returns/Repair button within the screen of Figure 4 causes a screen such as that of Figure 25 to be displayed. This screen allows a user to identify, in any of various ways, a product to be returned or repaired. For example, the product may be identified specifically by serial number, asset tag number, or the order to which the product belongs can be identified by customer purchase order number, customer invoice number, customer Purchase Requisition Number (PRN), or customer Request For Quote (RFQ) number. Clicking on the "More Search Options" button causes a screen such as that of Figure 26 to be displayed. From this screen, the user can search for a product to be returned by manufacturer name, part number and/or purchase date. The user may also look up Return Merchandise Authorization (RMA) records by date. Figure 27, for example, shows RMAs created between 6/2/98 and 7/1/98. Clicking on the RMA number causes the corresponding RMA record to be displayed as shown, for example, in Figure 28.

Clicking on the Tracking button within the screen of Figure 4 causes a screen such as that of Figure 29 to be displayed. The user selects the type of tracking information desired: sale order status, return product and service part status, product purchase history, or return and service history. If other status information is desired, the user may describe the desired information and submit a an email

request. In essence, the present system allows remote users, including customers, vendors, manufacturers, etc., to view relevant status information pertaining to most or all of the product life cycle stages: purchasing, receiving, shipping, installation/assembly, billing, return/service, etc.

Clicking on "Sales Order Status" (Figure 29) causes a screen such as that of Figure 30 to be displayed. A sales order may be identified by customer purchase order number, customer invoice number, customer Purchase Requisition Number (PRN), or customer Request For Quote (RFQ) number or by identifying an item belonging to the order, by serial number or asset tag number. If the user does not have any of this information, the user may search for sales orders by manufacturer, part number, and/or date range. Figure 31, for example, shows the result of searching for sales orders by manufacturer (Compaq).

Clicking on "Return Product & Service Part Status" (Figure 29) causes a screen such as that of Figure 32 to be displayed. RMAs may be identified by RMA number, temporary case number, quote number, or by any of the various pieces of information referred to in previously (PO number, etc.). Figure 33, for example, shows RMAs identified by PO number. The user checks one or more RMAs of interest and then selects an action to take, e.g., "Get Freight Carrier & Tracking #" or "Ship to Address." Selecting "Get Freight Carrier & Tracking #" causes a screen such as that of Figure 34 to be displayed.

By clicking on "Product Purchase History" (Figure 29), the user may display by date range items previously purchased. Figure 35, for example, displays items purchased from Oct. 4, 1998 to Oct. 5, 1998. Similarly, clicking on "Product Return History" causes a screen such as that of Figure 36 to be displayed. Figure 37 displays items returned from Apr. 1, 1998 to May 1, 1998.

Clicking on the Reports button within the screen of Figure 4 causes a screen such as that of Figure 38 to be displayed. The reports may include such reports as the following: Back Order Reports, Monthly Sales Reports, Packing

Slips, RMA Reports, Shipping Reports, etc.

Clicking on "Back Order Reports" (Figure 38) causes a screen such as that of Figure 39 to be displayed. Some units of an item may have been shipped but not all. If so, the 1st Ship and Last Ship fields indicate when the first unit of that item was shipped and when the last unit was shipped.

Clicking on "Monthly Sales Reports" (Figure 38) causes a screen such as that of Figure 40 to be displayed. The user selects a date range or a month and clicks "Take Action." A display such as that of Figure 41 results, listing each item sold on the user's account during the period, including total quantity, total cost, average unit cost and number of times ordered. Also displayed is the status of each purchase order for the period, the grand total of all purchases for the period, and the number of orders.

Clicking on "Packing Slips" (Figure 38) causes a screen such as that of Figure 42 to be displayed. Packing slips may be searched by providing a piece of identifying information in similar manner as described previously or may be identified by month. Figure 43, for example, shows packing slips for the month of Oct., 1998. Clicking on the packing slip number causes the packing slip to be displayed, as shown in Figure 44.

Clicking on "RMA Reports" (Figure 38) causes a screen such as that of Figure 130 to be displayed. The user is presented with various options, for example, show approved RMAs, show pending RMAs, show all open RMAs, etc. Clicking on Option 1 causes a screen such as that of Figure 131 to be displayed. By clicking on an RMA number, details of the RMA may be displayed. Clicking on Option 2 causes a similar screen to be displayed, showing only RMAs that have been approved. Clicking on Option 3 causes a screen such that of Figure 132 to be displayed, showing all open RMAs.

Clicking on "Shipping Reports" (Figure 38) causes a screen such as that of Figure 133 to be displayed. The user is prompted to specify a date range for gener-

ating a shipping report. Clicking on "Submit" causes a screen such as that of Figure 134 to be displayed, summarizing the number of shipping records found. Clicking on "Show All Details" causes a screen such as that of Figure 135 to be displayed. Items shipped during the specified period are displayed by PO number. Clicking on "POD" for a particular item causes Proof of Delivery information for that item to be displayed as shown, for example, in Figure 136. In addition, the user may request email status updates for an order by clicking the corresponding link. As the order status changes, the user will then be automatically informed by email.

Clicking on the Accounting button within the screen of Figure 4 causes a screen such as that of Figure 137 to be displayed. The user can retrieve particular invoices and credit memos by supplying any of various pieces of identifying information, or can retrieve invoices and credit memos by date range. Retrieving by date range causes a screen such as that of Figure 138 to be displayed. By clicking on the appropriate button, the user can display a selected invoice, purchase order, or packing slip. Clicking an invoice button, for example, causes a screen such as that of Figure 139 to be displayed.

The user can also enter a list of invoice numbers to be retrieved. More particularly, selecting Option 8 within the screen of Figure 137 causes a screen such as that of Figure 140 to be displayed. The user can then enter as many invoice numbers as desired.

A user may create one or more quotes but not act on the quotes for a considerable period of time. The quotes serve as an expression of interest on the part of the user. As time passes, however, the liklihood of a quote becoming an order decreases. In accordance with one aspect of the invention, such quotes are automatically identified, and communication with the users is undertaken so as to increase the liklihood of quotes being converted to orders. The communication may be Web-based and may, for example, take the form a promotional offer.

As may be appreciated from the foregoing description, the system provides for "information-rich" invoice payment status tracking and display. The simple knowledge that an invoice is open (has not been paid) is of little value. The more pressing question is *why* a customer invoice should be paid (e.g., has a return question been resolved?) or *why* vendor invoice has not been paid (e.g., was sales tax incorrectly charged?). The present system is designed to track such invoice payment status information. Because the database is Web-enabled, the same information may be readily displayed to customers and vendors, avoiding the need for telephone calls, "telephone tag," etc.

The present Web user interface is designed to accomodate a wide range of users, ranging from unsophisticated to sophisticated. To accomodate the unsophisticated user, any of various bits or pieces of information may be used to retrieve a record, for example the approximate purchase date. To accomodate the sophisticated user, multiple identifiers may be entered at a time in order to retrieve multiple records at a time, e.g., multiple part numbers, invoice numbers, RMA numbers (Return Merchandise Authorization numbers, described more fully hereafter), etc. This feature allows a user to quickly access a collection of desired information quickly with a single click. This feature is especially powerful in connection with RMAs. Instead of selecting items one at a time in order to create return requests, a user may enter several or many identifiers of a particular type (e.g., P.O. numbers, invoice numbers, asset tag numbers, etc.) and create a corresponding number of return requests.

Preferably, this same multiple-entry feature is provided in an internal client user interface in addition to the Web user interface.

#### Web Security

Doing business electronically poses various security risks. In the case of consumer-oriented Web commerce, much attention has been focused on secure transmission of credit card numbers and various security mechanism have been

made available. In the case of business-to-business Web commerce of the type described, payment is usually not by credit card except for very small transactions. Instead, security risks involve potential abuse of the system by external parties or even internal parties. The present invention implements various security mechanisms to eliminate or minimize the potential for such abuse. Fundamentally, the security mechanisms are based on concepts of authority and lineage. A simple example is that the ship-to address for an order cannot be changed on-line. This prevents someone from ordering products and having them sent to their home or elsewhere.

Lineage relates authority to organizational hierarchy. The organizational hierarchy of Web users for a particular customer may be represented in tree fashion. A user at the leaf level may be given authority to get quotes but not to place orders. A user at a next-higher level may be given authority to view the quotes of users within a limited sub-tree and may be given limited authority to place orders. A user at the root of the tree may be given unlimited authority, from the standpoint of the customer, to view quotes of any user and place orders in any amount.

Referring generally to Figure 46, in the case of a typical company, various end users will be given different levels of authority, e.g., to create quotes but not purchase, to track orders, to perform returns, to view order information via the Web, or, in the most limited case, to have no access to Web purchasing information. To initiate the purchase process, an end user makes a quote request to his or her supervisor, who must approve the request. The request may require multiple further approvals, for example of an MIS department, an accounting department, a material management department, etc. In a typical scenario, the material management department will forward an approved request to a purchasing department. Authorized persons within the purchasing department may then send an order via the Web. In every instance, when Web access is attempted (and in fact every time a TCP packet is received), a user's authority is checked and that user's interaction

via the Web is limited to the scope of that authority.

External Web authority information is stored for each customer in a customer file. An example of a customer record is shown in Figure 47. From the customer file, a company price list record such as that of Figure 48 may be displayed. For each customer, a price basis may be agreed upon for items that the customer buys regularly. External Web authority information is stored as part of the customer price list.

The manner in which a external Web user's authority is specified is illustrated in a series of figures beginning with Figure 49. First, the user's name is entered, first name (Figure 49) then last name (Figure 50). An employee number may then be entered (Figure 51), absent which an arbitrary employee number is generated automatically. A dialog then asks whether the user is authorized to make Web purchases (Figure 52). If the user is authorized to make Web purchases, then a further dialog calls for a purchase limit, if any, to be specified (Figure 53). A confirmation dialog is then displayed (Figure 54). The customer price list record following addition of the Web user with specified authority is shown in Figure 55.

The specific limits placed on a user's purchase authority may vary. Other examples of limits that may be desired by some companies are a limit on the number of purchase orders per day, a limit on the total amount of purchase orders per day, a time-of-day limitation as to when orders may be placed, etc. Various other security parameters may be added. Such limits may be set and changed remotely via the Web and given immediate effect within the system.

Limits are also placed on internal users access to security parameters so as to provide customer assurance that there exists no potential for internal abuse of the system (e.g., authorizing a crony to make illicit purchases on a customer account). A user may have authority to use (view) but not approve changes to certain security parameters, and may have authority to use and approve changes to other security parameters. In an exemplary embodiment, the authority of various

users is set as illustrated in Figure 45.

# Catalog Management

In the case of a company based on the conventional model of real inventory, Web catalog management is relatively straightforward. In the case of a company based on the model of virtual inventory, "the world is your warehouse." Intelligent catalog management is therefore of vital importance. Intelligent catalog management, in an exemplary embodiment, is based on a concept of "baseline." A baseline is a collection of products that functions as a standard of comparison. In an exemplary embodiment, there is both a vendor baseline and a customer baseline. Using the baseline concept, a product list without duplicates may be displayed. Furthermore, there may be displayed to the customer only products that there is some reasonable likelihood of the customer buying.

On the vendor side, one vendor is selected to serve as the baseline vendor. The baseline vendor will typically be a vendor found to have the most comprehensive inventory, the most useful categorization scheme, etc., and may be varied as often as desired. To create an update baseline, product listings of vendors are compared with the current baseline. If a product is already part of the baseline, as determined by manufacturer part number, then the product is grouped under the same baseline listing. For example, the same computer may be available through multiple different vendors. Rather than creating multiple product listings for the same product, these multiple product listing are consolidated under a single baseline product listing. If a product is not in the baseline, it may be added to a "supplemental baseline." If the baseline vendor does not carry a particular product but one or more alternate vendors carry the product, then the product will be listed in the supplemental baseline, again without duplicates.

After an updated baseline has been compiled, it is compared with the previous baseline. A product listing may be found: 1) in the old baseline only; 2) in the new baseline only; or 3) in both. Product listings in categories 1 and 2 are flagged

as discontinued products and new products, respectively.

During the foregoing process, product cost and customer pricing information is updated. Also updated are URLs to vendor and manufacturer Web sites.

These URLs may be used to refer Web users to these sites for product information. Product list updating may occur continuously or at regular intervals using "pull" technology, "push" technology, some combination of the two, or some other information retrieval technology or combination of technologies.

On the customer side, a customer baseline is formed by combining: 1) customer APLs (Approved Product Lists) for all customers or some subset of customers; and 2) historical purchase information, taking into account such factors as purchase date, volume, etc. There results a non-duplicative list of products customers have bought or are presently approved to buy. Products in the vendor baseline may be flagged as belonging or not belonging to the customer baseline.

As a result of the baseline concept and the power of the DBMS, great flexibility is provided in the manner in which products may be displayed. A user may search the product file and request to see new products, discontinued products, vendor baseline products, without duplicates, vendor baseline products expanded to show duplicates, customer baseline products, customer-specific APL products, etc. In this manner, the seeming chaos that would otherwise result from the "infinitude" of products embraced by the notion of virtual inventory is tamed and made manageable.

Much of the difficulty of successfully implementing a cohesive business-to-business Web commerce solution has resulted from different aspects of a company's business being automated on different computing platforms. As illustrated in Figure 56, for example, a product catalog may be implemented on one platform, shipping implemented on another platform, accounting implemented on still another platform, etc. To interface all of these different functions to the Web requires multiple interfaces.

By using a single Web-enabled database and providing for all necessary functions within a single database schema, the present Web commerce solution avoids the daunting complexity characteristic of the prior art. Referring to Figure 57, a single universal interface may be used to place the entire contents of the database, or as much of those contents as desired, on the Web.

#### **Database Schema**

An important feature of the present system is that a single data<sup>1</sup> ase, described by a single database schema, is used to automate an overall business process, end-to-end. To do so, the schema must, understandably, be quite complex. A general outline of the schema is shown in Figure 58. The complete schema, or structure diagram, is set forth as Appendix A.

Referring to Figure 58, the manner in which various automation processes relate on an inter-domain basis may be appreciated. The products domain is represented in approximately the upper third of Figure 58 and includes sales functions (5801) and shipping/receiving functions (5803). Purchasing and installation functions, now shown in Figure 58, are shown in the microfiche appendix. The payments domain is represented in approximately the middle third of Figure 58 and includes AP functions (5805), AR functions (5807) and return functions (5809). The financial performance domain is represented in approximately the lower third of Figure 58 and has financial information automatically posted to it from the payments domain, as described more fully hereinafter. The personnel domain is not shown in Figure 58 but draws upon information from the other domains in a manner described more fully hereinafter.

In an exemplary embodiment, the relational database management system provides both a "Quick Switch" option whereby any base table may be viewed or a "Related Switch" option (described in greater detail hereinafter) whereby a base table may be selected from which is then displayed a row related to a selected row in a current table. Various user options may be provided programmatically. Table

1 is a list of most of the base tables and corresponding options in an exemplary embodiment of the invention.

Table 1

Base Table	(Options)
Addresses	
AllocatedIndex	
AP_Registers	
AR_Registers	
Chart of Acents	
Checking_Acts	
Ch Statements	
Claims	
Commission Reg	Quick invoice lookup Quick credit lookup  Get register Get not approved Get approved but not paid  Approve Disapprove Change payment date  Pay

Table 1

Base Table	(Options)
Commissions	Quick lookup by period Quick transaction lookup Quick PO lookup Quick MWS lookup Quick invoice lookup Quick credit memo lookup  Get not approved Approve Get approved Schedule payment  Notes  Hold Get hold  Reset back 1  Check commissions Recalculate commissions
Contacts File	Change commission Email
CustCredMemos	Quick memo lookun
CusiCrediviemos	Quick memo lookup Credits not taken Credits taken Credits on hold Internal credits not taken Internal credits taken Hold credit memo  Internal notes Customer notes Internal status change

# Table 1

Base Table	(Options)
Customers	Add employee purchase record
	Approve customer
	Find employee
	List employees
CustPayments	Get not approved Get not posted Approve Post
Cust_invoices	Quick invoice lookup
	Cust invoice summary Print selection Comm report  Get AR report selection Get not issued Get not paid Get no charge Get pre-paid  Close—no charge  Split invoice  Join 2 invoices  Issue invoices  Check for not issued invoices
Defaults	Check for not issued invoices
DropShipments	
FAX Templates	
Item Details	

Table 1

Base Table	(Options)
Items Sold	Quick MWS# lookup Add MWS to fast order
	Open order reports Expedite/availability
	Customer notes CSR notes
	Status (restricted)
	Expand to all items sold Remove shipped Check selection again Update MWSs
	Clear updates
	Tech expedite Clear tech expedite
	Get in house not rcvd Receive in house
	Get installation not rcvd Receive installation
MWSLog	
OverUnderPay	Get not reconciled Get not cleared Get open Close
Packing Slips	
Partners	Find by expense account
	Vendor priority maintenance
Personnel	
PID ItemsSold	
PIDs	
Products	

Table 1

Base Table	(Options)
Purchase Stats	
Purchasing	
Quote Detail	
Rcvd Boxes	
Receiving	Receive Installation Update MWSs Double, wrong, defective, or no MWS Fill allocation Freight check Recover receiving register
Report	
RMA	Quick RMA lookup Quick case lookup Quick PO/PID/PRN/RFQ Get Web RMAs Update RMAs Expected cred summary Edit fax cover sheet notes

Table 1

Base Table	(Options)
Sales Records	Quick MWS# lookup Quick quote# lookup Quick PO/RFQ/PID/PRN LU/conf.
	PurchChecks
	Update MWSs
	Expedite/availability/purch
	Urgent Not Urgent
	Daily PO confirmation Get quotes
	Print quote confirmation
	Quotes requiring REVIEW Cancel REVIEW
	Get purchasing records Print purchase summary
	Clear updates
	Lock Unlock Get unlocked
	Change TPO to real PO Get temporary POs
	Get Web quotes
Sales_Reps	
Sales_Support	
Sales_Taxes	Recalc selection
	Add sales tax

Table 1

Base Table	(Options)
Shipping	Quick lookup by period Quick lookup by pickup number
	_ Following works in selection Get not reconciled open
	Get not reconciled closed
	Get reconciled open Get reconciled closed
	Installation
	Update MWSs
	Freight check
	Reconcile freight
	Recover register Merge registers
TaxRegister	Due dates Update user selection Print user selection
	Sets window
Tax_Tables	

Table 1

Base Table	(Options)
Ven Pmnt Regs	Quick invoice lookup Quick credit lookup
	Get register Get not approved Get approved Lut not paid
	Approve Disapprove
	Change payment date
	Pay
	Get regs with credit balances Vendors with credit balances
	Close register Open register
VenCollection	Quick memo lookup Quick invoice lookup Quick payment register lookup
	Get not used Get excess/not distributed Get distributions
	Get expected memos Reconcile expected memo
	Get not pre-approved Pre-approve
	Get pre-approved Approve
	Get approved Schedule
	Reset status back 1
	Cancel credit memo
VenMultiCred	

Table 1

Base Table	(Options)
VenRecExpCred	

Table 1

Base Table	(Options)
Ven_Invoices	Quick invoice lookup Quick voucher lookup Quick check lookup Search selection by date
	Verify selection Daily verification
	Get all not paid Get not reconciled Get reconciled
	Reconcile with credit
	Pre-approve Get pre-approved Remove pre-approved
	APPROVE Get approved
	Schedule payments Schedule pre-paid payments
	Close selection HOLD selection Get hold
	Reset status back 1
	Edit terms/payment/vouchers
	Integrity check
	Temporary notes
	Update invoice
	Mark ready for review
	Get ready to review Mark reviewed Get reviewed

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Various screen displays showing the options pop-up menu for that screen display are shown in Figure 124 through Figure 128.

## **Business Process—Overview**

An overview of the present automated business process is shown in Figure 59. In an illustrated embodiment, the automated business process has nine entry points, designated E1-E9, at which users enter information into the system. Interaction with the system is carefully controlled and user inputs carefully qualified to ensure, to the greatest degree possible, error-free operation.

The business process is customer-driven. The first entry point E1 in the business process is Sales/RMAs. In response to a customer request, a user having responsibility for E1 enters information about the customer request into the database. If the request regards sales, the information is checked and converted to a Master Worksheet (MWS). At an entry point E2, the responsible user groups MWSs for purchasing and places orders. Information is assembled for later use in receiving (E3), installation (E4), and shipping (E5). Respective users at these entry points make entries into the database which as confirmed against the assembled Purchasing/Shipping/Receiving/Installation (PRIS) information to verify correctness.

Unlike prior art systems, the present system provides the option of carrying inventory or operating under the concept of virtual inventory. In accordance with the concept of virtual inventory, all of the goods available for purchase in all of the warehouses throughout the world are regarded as available inventory. Because the Web allows business to take place at light speed, the difference between physical inventory and no physical inventory can be merely the click of a button on a computer screen. As goods are received and shipped, these events are tracked by a virtual inventory process in which all items are presold. In one aspect of the invention, virtual inventory is defined as each vendor order item being related to at least one item sold record created in response to receiving user demand informa-

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tion directly from a user; i.e., the system is "demand driven."

Virtual inventory may be more fully understood in relation to the data processing concept of pipelining. Some delay occurs as the data pipeline is initially filled. Thereafter, results are produced at every cycle. The initial delay is the time required to perform a data operation on the data inputs. Similarly in the case of goods. An initial inventory of goods may be required to satisfy demand during a time period from when a demand is received until that demand can be filled—i.e., the manufacturing cycle. Thereafter, supply and demand should be exactly balanced. As demand increases and decreases, the rate of manufacture is varied accordingly such that supply and demand remain exactly balanced. In the case of a reseller, the manufacturing cycle is zero. The requirements for real inventory are therefore zero, enabling pure virtual inventory. In other businesses with non-zero manufacturing cycles (from days to weeks, months or years), the foregoing concept of virtual inventory may still be applied such that, in the "steady-state" condition, supply and demand remain exactly balanced.

Where physical inventory is required or desirable, it may be treated simply as an internal demand as opposed to a customer demand. In both cases, the demand is represented by an MWS. In the case of internal demand, however, the customer is the business itself.

Referring still to Figure 59, entry points E6 and E7 relates to customer and vendor payments, respectively. Assembled information is input to A/P and A/R modules. Customer payments are received and entered in conjunction with the A/P module. Vendor payments are made in conjunction with the A/R module.

A general ledger (GL) module tracks transactions and their financial implications in real time. It therefore receives information from the A/P, A/R and virtual inventory modules as well and entry points E6 and E7. Bank statement information is also input to the general ledger module at entry point E8.

The customer request, instead of being for sales, may be an RMA request.

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Information is then input from E1 to an RMA module. A reverse process in then executed, begun by an RMA number being communicated to the customer. In the typical case, the customer then returns merchandise authorized for return. The returned merchandise is received (entry point E3) in conjunction with the RMA module and receiving information portion of the assembled information. The RMA module communicates with the GL module so that appropriate accounting entries may be made.

The effect of the overall business process is two-fold. First, a response to the customer's input is produced and communicated back to the customer. Second, during the course of the business transaction, a wealth of historical data are accumulated that may then be subjected to factual analysis for purposes of ensuring customer satisfaction, evaluating employee performance, and evaluating vendor performance.

In the following description, the course of an order will be described within each of the domains identified in Figure 3, as follows: in the product domain, from quote to shipment, as well as return (although rather atypical, returns are nevertheless a common occurrence); in the payments domain, from invoice to payment (both customer and vendor); in the financial performance domain, from cashflow to financial statements; and finally, in the factual performance domain, from parameters such as time, quantity and dollar volume to individual and group employee performance.

## Sales

As may be appreciated from the foregoing description, an order may be preceded by a quote. Quotes may be requested and orders may be placed in writing (e.g., by fax), verbally (e.g., by phone), or electronically via the Web. More generally, order information may be conveyed by electronic means (e.g., Internet, intranet, EDI, satellite, remote terminal direct-dial), human-mediated telecommunications (e.g., email, phone, fax), or by physical means (letter, visit,

etc.). Regardless of the origin of the quote or order, the quote or order becomes a sales record.

A screen display that may be used to view sales records is shown in Figure 60. Quotes are each assigned a Quote number having a "Q" prefix. Orders are tracked via records referred to as "Master Work Sheets" (MWS). A Master Worksheet contains all of the vital information related to an order. As seen in Figure 60, orders are each assigned a MWS number having a MWS prefix. The screen display of Figure 60 includes a status column in which the status of each quote and order is indicated, e.g., WebSubmit, WebQuote, Purchasing, etc. The status of each record can therefore be readily ascertained and tracked.

Referring to Figure 61, the input layout of a quote is shown. During record input, the system prompts the user at every opportunity. For example, when the cursor is placed within the customer field, a list of previous customers is displayed. Assuming the customer is a repeat customer, the user can select the customer from the list. Various fields are then completed from information previously stored for that customer.

To add an item to a quote, the user clicks the "+" icon, followed by the "Go Prod" button. The Products file is then displayed, as shown in Figure 62. The Products file may contain hundred of thousands or even millions of product records of products from different vendors. When the user selects a product, the all of the relevant information for that product is transferred to the quote. To facilitate selection, the product file may be searched in various ways, e.g. by vendor, product category, etc. By searching the products file by manufacturer part number, the vendor offering the best price for a particular product may be identified.

When all items have been added, the user is asked to specify partial shipment status. The partial shipment status specifies what items, if any, can be shipped separately and what items, if any, are required to be shipped together. The user is further prompted to enter installation information and to ensure that all required cables, brackets, etc. have been ordered. In the case of computer equipment, for example, installation may involve installing a card or installing memory within a computer, loading software, etc. If installation is specified, installation charges are automatically added to the quote.

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During the foregoing process, the user may enter notes within a screen 6101. This screen is displayed whenever the quote or MWS is displayed. If a quote is created on the Web, a separate notes screen is provided for customer notes. A corresponding notes screen for internal use only is provided for all quotes.

When the quote is satisfactory, the user may then save the quote by pressing the post to purchasing button.

To ensure that a quote is correct, one or more additional review stages may be required before the quote is converted to an MWS for purchasing. For example, the quote may be reviewed by "inside sales" to make sure that any compatibility requirements have been met and that, from a technical viewpoint, there are no errors in the quote. In a further review stage, the quote may be compared to a paper purchase order, if one exists, to make sure there are no discrepancies. When the quote has passed whatever level of review is required, it is then marked reviewed and converted to an MWS. The format of an MWS is shown in Figure 63.

Note that, during the foregoing process, different people may have different limited privileges. Also, throughout the foregoing process and throughout the system generally, at each information entry point, the user's input is checked for accuracy in order to prevent common mistakes from occurring.

## PRIS (Purchasing, Receiving, Installation, Shipping)

Purchasing, receiving, installation and shipping functions are closely interrelated. For this reason, preferably the output display/user interface presented during these different processes preserve a common look and feel.

Purchasing may be based on a real inventory model, a virtual inventory model, or a combination of the two. In the case of the virtual inventory model,

automating purchasing functions in such as manner as to 1) scrupulously avoid physical inventory; and 2) achieve business scalability, becomes a challenge. The following description assumes that purchasing is based at least in part on a virtual inventory model.

A simplistic approach to purchasing is to treat each customer purchase order separately. Under this approach, however, the amount of work involved in purchasing is proportional to the number of customer purchase orders; business cannot achieve 100, 200 or 1000% growth in a short period of time without causing severe growing pains.

Instead, the purchasing module of the present system is designed for business scalability and maximum automation, allowing for dramatic growth without a dramatic increase in human effort and with little or no pain. Scalability is achieved by "commingling" customer orders in such as way that what appears to an outside vendor as a single large order is tracked within the system as a multitude of smaller orders.

Referring to Figure 64, purchase order sales actions result in MWS records, each MWS record including all of the relevant information required for purchasing. In an exemplary embodiment, this information includes internal MWS number, customer P.O. number, sales cost, sales price, vendor, part number, manufacturer, manufacturer part number, installation grouping (within a particular MWS), shipping instructions, and stock/inventory status. Each MWS is assigned a unique MWS number which is used throughout the life of a transaction to differentiate distinct purchase orders. Any unique identifier may server the same purpose, including, for example, a material code number, a purchase requisition number, etc.

The design of a purchasing output display/user interface greatly simplifies the purchasing process. For each item to be purchased, a record is displayed including each of the foregoing pieces of information. Preferably, all of the head-

ing allow for sorting on that heading. Furthermore, all items are selectable and may be expanded (by doubling clicking) into item details.

The user interface allows a variety of actions to be performed, including grouping items within the display, removing items from the display, cancelling or changing various aspects of an order, holding an item or splitting an item (e.g., in order to hold less than all of the items details belonging to an item), etc. In an exemplary embodiment, items may le grouped by stock status (B/O, short stock), by shipping instructions (partial shipment OK, no partial shipment), by vendor, by manufacturer, by MWSs including addendums, etc. Groups of items may be removed from the display, including any of the aforementioned grouping and install groups. An item sold (one or multiple physical items) may be removed or an item detail (a single physical item) may be removed. Cancellations and changes may be made to an item sold, an MWS, shipping method, and freight charges.

In accordance with the virtual inventory concept, items within a group (an installation group or a ship group, for example) are acted upon as a group. For example, if one of the items is removed from the purchasing screen (purchase of the item is delayed), all items in the group are removed from the display. Undesired inventory is therefore avoided. Otherwise, an item might be ordered and received only to find that it must be installed with or ship with an item that is back ordered. Valuable cash is then tied up in inventory waiting for the back-ordered item. The present system avoids such unwanted inventory.

In a typical scenario, a purchaser's work might proceed in the following manner.

- 1. Get all unfinished and new work (all items having no order date).
- Select a subset of items to work and remove all other items from the output display.
- 3. Get all back ordered items and purchase them first. Eliminate related "no partial" items from the output display until the corresponding back-

- ordered item has been received.
- 4. Group items from different orders and possibly change vendor on some items to obtain quantity discounts, if possible.
- 5. Place order and repeat.

In a preferred embodiment, at least the latter two steps are performed via the Web or with information obtained via the Web. Orders may either be placed directly or posted for bid by interested vendors. Furthermore, in accordance with supply-chain management functions described more fully hereafter, a single purchase may be "broadcast" via the Web to all relevant vendors and manfacturers within a supply chain for that product.

Various user interface buttons relate to the actual placing of a purchase order. In a telephonic transaction, purchase cost (Pcost) on an item might be negotiated downward below the sales cost (Scost). By selecting an item and clicking on the button, the purchase cost may be input in the course of placing the order. A sales confirmation number may also be input by clicking on the corresponding button. An automatically generated PO number may be assigned by clicking on button. By clicking on the button, the output display is refreshed to remove from the display items that have been ordered. Simultaneously, the system marks the ordered items as ready to receiving, thus preparing the items for receiving.

More preferably, purchase orders, instead of being placed manually, are placed electronically by linking to the seller's network of vendors. Automated purchasing may occur continuously or at regular intervals using "pull" technology, "push" technology, some combination of the two, or some other information retrieval technology or combination of technologies.

Business rules guide the user to follow a pre-established routine for easily accomplishing complex business tasks including purchasing. Note, however, that dynamic workflow allows an experienced user with the requisite access authority to override business rules in order to handle new business requirements. This

authority is in turn counter-balanced by various consistency checks throughout the system that ensure accountability.

Business rules implemented by the purchasing process include the following:

- 1. Items cannot be ordered before a quote is converted to a MWS.
- 2. Duplicate orders are not allowed by item or MWS.
- 3. Items can only be ordered from approved vendors.
- 4. Purchasing can only be done by authorized personnel.
- 5. Purchasing notes can only be viewed by authorized personnel.
- 6. Purchase costs can only be viewed by authorized personnel.

Referring to Figure 65, purchasing information, derived from MWSs, is used in the receiving process. (An item must have been purchased to be received.)

Returns (RMA) information, also derived from MWSs, is also used in the receiving process. (Return items must be received in order to give credit.)

When the receiving process is begun, only items sold having an order date but no receive date are displayed. Double clicking on a item causes specific receiving instructions for that item to be displayed, as described more fully hereinafter. The display format is very similar to that of the purchasing process. The possible actions that may be initiated, however, are particular to receiving. Those actions include 1) input actions; and 2) display actions.

Information input during receiving includes packing slip number, serial number (each physical item, where applicable), carrier, quantity, payment terms, number of boxes, condition upon receipt, etc. Batch input for all packing slips and items. The system automatically matches input with items that exist in the system such that the same item cannot be received twice, the wrong item cannot be received, a cancelled order cannot be received, etc.

Expected to receive will exclude refusal items. For example, a customer may change his or her mind after an order has been placed but before the item has

been received. In this instance, a refuse instruction may be placed on the item to prevent it from being received.

As in the case of purchasing, in the case of receiving also, great benefit is obtained from allowing vendor access via the Web to see what products order from that vendor have been received. The vendor then obtains the information it requires to be truly responsive to its customer's needs.

Referring to Figure 66, installation is based on the same type of output display. However, only installation groups are shown. Items requiring no installation are not displayed. Furthermore, the user has the option to show all items requiring installation or to show only items requiring installation that have been received. The possible actions that may be initiated include 1) actions used to track installation in various different stages of completion; and 2) input actions, namely input of serial number and asset tag number. (Asset tag numbers may be affixed by prearrangement with the customer and retained in the system indefinitely to assist the customer in accounting for equipment.)

An installation, once begun, may have several possible outcomes. In the typical case, the installation will be completed successfully and the installation group may be released for shipment. In other instances, installation may be only partially completed—e.g., manufacturer technical support may be required, additional parts may be required to complete installation, or additional installation may be required for some other reason. In some instances, the appropriate action may be disinstallation, for RMA purposes or for some other reason. All of these different stages of completion are tracked within the system.

Referring to Figure 67, the shipping process, like receiving, uses both purchase information and RMA information. The output display displays only items sold having a received date but no ship date. Double clicking on a item causes specific shipping instructions for that item to be displayed, as described more fully hereinafter. Input actions that may be initiated include inputting a shipping trackWO 99/33016

ing number, serial number (if not previously entered), customer specific number or asset tag number, claim value, carrier (or will call, which causes a local sales tax rate to be applied), payment terms, boxes, etc. Provision is also made to display only those items expected to ship, excluding refusal items, hold items and items with COD/cash terms.

Referring to Figure 68, throughout the foregoing processes, and in particular receiving, installation and shipping, notes conveying instructions regarding specific items may be displayed by double-clicking an item to cause a item detail display to appear. Included within the item detail display are several notes boxes, including boxes for unique installation notes, standard default notes from the customer file, unique shipping notes, standard default shipping notes from the vendor file (for RMA), RMA installation notes, receiving notes, etc.

The PRIS output display also includes an "Expedite" view, shown in Figure 69. The expedite function is to minimize delay in receipt of ordered products. Expedite actions include entering the Estimated Time of Arrival (ETA) of a product based on contact with the vendor and/or shipper and marking items in accordance with various expedite categories, as well as entering notes if necessary concerning the problem and expected solution.

In accordance with one embodiment of the invention, expedite information may be brought up from the MWS screen, as shown in Figure 70. In Figure 70, a radio button has been clicked to cause a Not Received Report to be displayed. This report shows percentage of order completion in terms of ordering, receiving and shipping, as well as the age of the order in days. Various filtering options are provided. Expedite status for each item may be entered by clicking on one of a large number of status buttons, e.g., "Urgent," "Wrong Product," etc. A Not Shipped report screen display is shown in Figure 71.

Expedite status may also be set using a more abbreviated expedite pop-up, shown in Figure 72.

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Figure 145 through Figure 149 show different output displays tailored for purchasing, receiving, installation and shipping in accordance with another embodiment of the invention. These output displays are different views of the same underlying data stored in the Item Detail records—the basis "currency" of the system.

Figure 145 shows a purchasing output display. Various columns are common to all of the PRIS output displays, e.g., MWS number and date, internal PO number, customer name and PO number, item description, etc. Columns of particular interest for purposes of purchasing are Scost/Pcost (expected cost at time of sale and actual purchasing cost), Vendor/Conf#, Mfr./Vendor part number (PN), Lprice/Lcost (the last sales price and purchasing cost for this item), Rebate, Special, and Pcomments, or purchasing comments.

Figure 146 shows an Expedite output display. Of particular interest for purposes of expediting are Order/ETA (expected time of arrival at the time of order), Epd ETA/Status (latest ETA, reason for delay, etc.) and Epd Condition.

Figure 147 shows a Receiving output display. Of particular interest for purposes of receiving is Receive Condition.

Figure 148 shows an Installation output display. Of particular interest for purposes of installation are Install/Date and Install Group. Items within a same install group are to be installed together to form a single functional product or assembly.

Figure 149 shows a Shipping output display. Of particular interest for purposes of shipping are Order/Recd and Ship Group. Items within a same ship group are to be shipped together.

As with both purchasing and receiving, preferably vendors are given access via the Web to expedite information relating to that vendor.

The foregoing principles explained in relation to PRIS may be adapted to other businesses in which, instead of installation, any type of transformation may

be performed. In channel assembly, for example, parts are assembled into a product mere days or even hours before the product is shipped to a customer. The transformation may therefore be assembly instead of installation. In other businesses, the transformation may be quite different, e.g., testing, burning-in, mixing, aging, curing, machining, etc. The transformation may be a single-step transformation or a multiple-step transformation in which intermediate products are produced. Whatever the nature of the transformation, information concerning what materials have been transformed, various stages of transformation, etc., are tracked in the database. The purchasing, shipping and receiving functions described previously therefore become part of a comprehensive materials management system.

#### **RMAs**

Normally, the order will be successfully shipped to and received by the customer, who would then begin to use the products. In some instances, however, the product may not work as intended, the product may be lost or damaged in shipping, duplicate products may be shipped, or the customer may change his or her mind, necessitating that a product be returned. Returns are provided for through a Return Merchandise Authorization (RMA) mechanism. The same mechanism may be used for other account adjustments other than actual returns, for example freight adjustments, etc. In fact, in some sense, the RMA mechanism may be regarded as a garbage can of sorts—any action that is later found to be incorrect, for any reason, can be reversed through the RMA mechanism. Furthermore, the existence of an RMA has immediate effect throughout the system, on purchasing, receiving, installation, shipping, accounts payable, and accounts receivable. For example, if an RMA is received and the corresponding vendor invoice has not yet been paid, the vendor invoice will not be paid until the return product is received and shipped back to the vendor and a credit received from the vendor. The immediacy of the effect of creating an RMA is achieved through the use of a central underlying table—item detail—that functions as the building block upon which other tables

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depend. In essence, most data is viewed within the system simply as a "window" into the item detail table.

An RMA may also be used for warranty replacement parts. This feature, coupled with Web access, allows customer's to track replacement parts themselves without contacting a technician or service representative. A customer may request an RMA in any of the ways previously described for obtaining a quote or placing an order. When an RMA request is received, an RMA record is created. An RMA screen display is shown in Figure 73.

Referring again to Figure 63, a MWS display includes an RMA button. When this button is clicked, the user is prompted to select an item from the displayed MWS for return. An Add RMA Record screen display such as that of Figure 74 is then used to specify return type, reason, etc. A typical RMA has two "sides," the customer side and the vendor side. When the item to be returned is selected, preferably both the customer side and the vendor side are filled out by the system. Any changes may be made from a screen display such as that of Figure 75. By clicking a button, the screen display of Figure 75 allows for display of the customer side only, the vendor side only, or both sides of the transaction, as well as claims information.

A return may be made for any of a number of different reasons. Different return types are therefore defined. Depending on the return type, some RMA fields will not be applicable. Preferably, the system is provided with sufficient intelligence to automatically fill in these fields as "N/A."

As shown in Figure 76, a lookup table may be used complete various fields of an RMA record based on the selected return type. If a return is for credit, for example, then return type 1 is the corresponding return type. Depending on whether payment was by check, credit card or credit memo, different fields may be applicable. In the present example, however, the mode of payment does not affect the manner in which the RMA is completed. As noted previously, an RMA has

both a customer side and a vendor side. In Figure 76 therefore, each table cell has an upper half corresponding to the vendor side (V) and a lower half corresponding to the customer side (C). To take a few example fields, in the case of a return for credit, no replacement product is called for, hence the Repl MWS column is marked N, for no. Since no replacement product is expected, then on the vendor side, the Rec'd column is N/A, and on the customer side, the Ship column is N/A. Similar logic dictates the way in which the remainder of the table is completed.

Similar logic tables may be used to automatically approve RMAs and provide an RMA number instantaneously for most RMA requests. Again, approval has a customer side and a vendor or manufacturer side, at least in the case of a virtual inventory model. (RMAs eliminate, or at least minimize, the hazard of accumulating obsolete inventory as a result of returns.) In an exemplary embodiment, a series of limit checks are performed on an RMA request. Referring to Figure 77, a limit file is shown, having a customer portion, a vendor portion and a manufacturer portion. Assume once again that the return type is return for credit, and assume further that the payment mode was check. The first column has a Y value, indicating that automatic approval of RMAs of this return type are allowed. The next three columns relate to the manufacturer and contain the values Y, Y and N, respectively, indicating that for the RMA to be approved the manufacturer must allow returns, that the manufacturer must further allow open box returns, and that the time to RMA cannot exceed the manufacturer's allowed maximum time duration. For a particular manufacturer, the manufacturer's specific return policies are stored in a table such as that shown in Figure 78.

Referring again to Figure 77, the next two columns relate to vendor and contain the values N and N/A, respectively, indicating that the time to RMA cannot exceed the vendor's allowed maximum time duration and that the vendor's restocking fee policies are not applicable for this type of return. For a particular vendor, the vendor's specific return policies are stored in a table such as that

shown in Figure 79.

Referring again to Figure 77, the next four columns relate to customer and contain the values N, N, N and N/A, respectively, indicating that the time to RMA cannot exceed the maximum time duration allowed for this customer, that there must be no restocking fee, that the sales price cannot exceed the maximum allowed for this customer, and that customer service ree policies are not applicable for this type of return. For a particular customer, specific return policies for that customer are stored in a table such as that shown in Figure 80.

If an RMA request meet all of the applicable automatic approval criteria, then it may be automatically approved, instantly, and an RMA number communicated to the customer as shown, for example, in Figure 81.

A more detailed listing of RMA types, subtypes and conditions is provided in Figure 159.

Business rules implemented by the RMA module include the following:

- 1. RMAs can only be created for items shipped to customer.
- 2. One item per RMA (quantities are OK).
- 3. Replacement Quotes are created by the user specifying the appropriate replacement product.
- 4. Generation of printed/faxed RMAs with Return packing slips for customer use.
- 5. Receiving can only receive items from customers with valid RMA issued.
- 6. Wrong or defective products automatically create RMAs.
- 7. Replacement MWSs can only be shipped after being released by purchasing.
- 8. Vendor RMAs must have vendor RMA numbers before shipping.
- 9. Complete control of RMA module by executive group.

One characteristic feature of the present system perhaps most evident in relation to RMAs is the display of information in a very complete way and in such a manner as to allow ready interaction. In conventional database applications, information is presented in simple row format within an output display. Multiple levels of "drill-down" may be required to display a particular detail. Furthermore, entry or manipulation of information can typically only be performed from a separate input screen.

In the case of the present system, by contrast, as exemplified by the RMA display of Figure 73, records are presented in a very information-rich format. Entry or manipulation of information is enabled within the same screen display. In the case of RMAs, for example, a user with the proper authority is able to approve or cancel an RMA, change an RMA to a different type, release a replacement shipment, etc.

A further important feature also greatly facilitates convenient navigation and ease of use. In most systems, to display related records, a search editor is used to enter a search. In the present system, by contrast, a "related-switch" menu bar is provided within most displays. Using this related switch feature, a user may select one or more records within the output display and select a related file from a popup of related files. The system then searches in the related file for records related to the selected records and displays the related records in the output display format of the related file. In the case of RMAs, for example, the related switch capability may be used to switch to related customer invoices, vendor invoices, credit memos, etc. One file may be related to another file but only indirectly, through a third file. In this instance, an intermediate search is required, the results of which are not displayed. Of course, the number of intermediate files may be more than one.

Preferably, vendors are given access via the Web to RMA information pertaining to them. A vendor may then immediately provide an RMA number without 64

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requiring any human intervention.

With vendor access to purchasing information, receiving information, expedite information and RMA information pertaining to that vendor, a truly integrated supply chain results. Such an arrangment makes global commerce just as convenient as local commerce. For example, a seller may have ten or hundreds of vendors worldwide, many in locations where the time difference would ordinarily make doing business difficult and tedious. Such difficulty is removed in the case of the present system, because all of the intelligence needed to do business resides in the system and is readily accessible at each party's convenience wherever in the world that party may be.

As previously described in relation to PRIS, the present single-database system contains information about installation and product configuration. This information may be used to advantage to avoid a common problem encountered in relation to RMAs. When a product is returned that has other add-on products installed, the user may forget to remove these add-on products before shipping the product to be returned. For example, a printer may have installed a memory upgrade and a network card. If the printer is returned to the vendor with the memory upgrade and the network card installed, there is some likelihood of the memory upgrade and network card being removed during service and not re-installed. These add-on products may then become lost.

To avoid this problem, when an RMA is requested for a product that has had one or more add-on products installed, a dialog is displayed to the user reminding the user to remove the add-in products prior to shipping back the product. The same reminder may instead, or in addition, be sent by e-mail, fax, etc.

The PRIS capabilities described previously may also be used to advantage to track RMA status and display status information via the Web. The stages of an RMA typically include some or all of the following: 1) shipped from customer to reseller; 2) received by reseller; 3) shipped by reseller to vendor; 4) received by

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vendor; 5) shipped by vendor; 6) received by reseller from vendor; and 7) shipped from reseller back to customer. With the possible exception of number 5, status information with respect to each of the foregoing stages is available within the database or, in the case of number 4, through conventional electronic tracking services offered by carriers such as UPS, Federal Express, etc.

## Design Philosophy: Self-Correcting Knowledge-Based System

The information-rich action-priented displays previously mentioned are a manifestation of a design philosophy in which a system knowledge base is continuously expanded with user assistance and reflected in the manner in which users interact with the system. Other manifestations of this design philosophy are found in the options described previously (Table 1 and Figure 124 through Figure 128) and the experiential constraints alluded to previously and described in greater detail hereinafter. Referring to Figure 129, a knowledge base is initially created based on system analysis and design considerations, considering the range of possible outcomes at each stage of the business process, and considering further the goal of total automation, phones free and paper and pencil free. These system analysis and design consideration will necessarily be incomplete—hence the need for dynamic workflow. No pretense is made that a single predetermined workflow definition will prove adequate in practice.

The knowledge base affects user interaction with the system through two different kinds of displays, a data input display and a process display. The data input display is used to actually enter data into the system. During the course of data entry at entry points E1-E9 (Figure 59), rigorous entry qualification occurs to eliminate errors. In the case of PRIS, for example, during receiving, only ordered items are allowed to be received. To cite a further example, during rendor invoice entry, described hereinafter in relation to Figure 121 through Figure 123, the system detects an attempt to enter a duplicate invoice number and prevents the duplicate from being entered. The process display is used to act on the data within the

system to move an item to the next stage, and in the course of such action has the effect of changing the status of records acted upon. In the case of RMAs, for example, the user may easily, with the click of a button, approve or cancel an RMA, issue a customer credit memo, change the N/A settings of the RMA, etc. In the case of expedite, the user may easily, with the click of a button, record the reason that a product has not been received. To cite further examples, in the case of vendor invoices and customer invoices, described hereinafter, the user may easily, with a click of a botton, mark a vendor invoice for approval or cause an aging report window to be displayed for customer invoices.

The knowledge base and the application of it to data input and user actions is what makes an automated, end-to-end, sequential business process possible. Depending on the skill level of the user, the user is given some level of authority ranging from minimum authority to maximum authority. For users with minimum authority, the system ensures that work gets done in a prescribed, correct manner. For users with greater authority, dynamic workflow provides myriad additional possibilities while maintaining accountability.

During use of the system, unanticipated circumstances are bound to arise in which the user cannot accomplish his or her task (or accomplish it as well) in a phones free, paper and pencil free manner using the current features of the system. In this event, the knowledge base of the system is then added to to solves the user's problem. In some instances, the user may be able to add to the knowledge base directly. For example, the user may wish to add a further return type by adding an entry to the table of Figure 75. Similarly, in the case of factual performance evaluation, described hereinafter, the user may choose different performance metrics or combinations of metrics to be tracked and displayed. In other instances, adding to the knowledge base may require administrative intervention. In the case of the options of Table 1 and Figure 124 through Figure 128, adding further options may require the efforts of a programmer.

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Having described for an order the course of events in the product domain, the course of events in the payments domain will now be described, first in relation to sales tax and sales commissions, then in relation to customer payments and finally in relation to vendor payments.

## Sales Tax and Sales Commissions

Sales tax and sales commissions are automatically computed and stored in the system based on applicable tax rates and commission rates.

In the case of sales tax, a sales tax table contains state tax rates and local tax rates. For a particular sale, the applicable tax rate is determined based on the ship-to address. Typically, preliminary tax payments are made each month and a final tax payment is made each quarter. Sales tax records are automatically added to a sales tax register (first prepayment, second prepayment, or final quarterly payment) for the appropriate period. As shown in Figure 82, the sales tax module automatically calculates the figures to be entered on each line of a sales tax return, or may be programmed to print out the actual return.

In the case of commissions, commission rates are stored within a Sales Rep file and a Sales Support file. Because each order is worked on by both outside sales and inside sales, each order will typically have two commissions. Commission records are created at the time a customer invoice is issued. Commissions are then approved and scheduled to a commission register for payment in a similar manner as accounts payable, described hereinafter. Multiple levels of commissions are provided for. A simple example of multiple commissions is where an outside salesperson responsible for customer interface is supported by an inside salesperson that reviews orders for correctness and troubleshoots the order, if necessary, during the fulfillment process. In more complex organization structures (e.g., multi-level marketing), the number of commissions may be greater than two.

#### **Accounts Receivable**

When an order is shipped, a customer invoice is automatically issued, i.e., entered into the computer system. If paper invoices are required, then at regular intervals (each day, for example) an accounts payable clerk prints out, checks and mails customer invoices issued during the preceding interval. (Alternatively, the printing and mailing of customer invoices may also be automated.) In an exemplary embodiment, invoices are issued using the "Issue invoices" option within the customer invoice file. A customer invoice screen display is shown in Figure 83. With the passage of time from the invoice date, invoices pass from one category to another, e.g., 30 days, 60 days, 90 days, etc. At any time, the accounts payable clerk may view invoices within different categories. Also, as is the case with other output screen displays, the user is able to manipulate information and interact with the system, e.g., to analyze an account, add a comment or note, etc., all without paper and pencil.

Referring more particularly to Figure 84, from a MWS output screen display, the user can select a group of invoices and click on a collections button to cause a collections summary to appear. By further clicking on a By Customer button, the selected invoices are broken down by customer as shown in Figure 85.

When a customer payment is received, a payables clerk clicks an add record button to add a customer payment record. The clerk is then presented with a pick list of customers. The clerk selects the customer from which the payment has been received. The customer is then prompted in turn to enter the mode of payment (check, cash, etc.) and the payment date. A customer payment record such as that shown in Figure 86 is created. A payment may correspond to multiple invoices. The clerk enters from the check stub reference numbers and invoice numbers, as well as the respective amounts, for each invoice (or credit) to which the check purportedly applies. Referring to Figure 86, for example, the check #429069, as indicated on the check stub, pertains to five different items, or reference numbers, the first three of which are invoices and the last two of which (DM32890/4829 and

DM32889/4695) are credits.

After the reference and invoice numbers have been entered from the check stub, the system attempts to match the entries to the corresponding invoices within the system. The clerk is prompted to enter the type of each item (e.g., invoice or credit) and the amount indicated on the check stub. The system then checks to see if the amounts indicated coincide with the expected amounts stored within the system and indicates each item as being reconciled or not reconciled. The clerk then saves the record, which may then be approved and posted by supervisory personnel.

Discrepancies may occur between payment amounts and invoice amounts, i.e., both overpayment and underpayment may occur. An OverUnderPay file is used to track and resolve such discrepancies. An OverUnderPay screen display is shown in Figure 87. A corresponding record detail screen display is shown in Figure 88. OverUnderPay is an example of dynamic workflow and allows for the application of user discretion in handling overpay and underpay situations given the requisite authority.

Business rules implemented by the A/R module include the following:

- 1. Invoices will be automatically created on shipment of products to customers
- 2. Items can only be invoiced once.
- 3. Invoices must be issued by accounting before they are valid.
- 4. EDI invoices are provided for. EDI invoices will automatically be sent via EDI
- 5. EDI invoices PID numbers must match PO PID numbers in the EDI file.
- 6. Customer invoice numbers indicated on the check stub must match with existing customer invoice numbers in the system. The amounts must correspond, else an overpay/underpay records is created as described above.

#### **Customer Collections**

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An important object of the present system is to allow routine operation of an entire business without paper and pencil. In the course of performing a business function, a person will typically gather information from various sources and jot down the information for reference while performing the business function. This reliance on paper and pencil is perhaps most apparent in the area of customer collections. Every invoice to be collected presents a different situation, as does every customer. Previous contacts with the customer may need to be followed up on, or, conversely, the customer may become annoyed at too frequent contact.

The present system overcomes these problems by providing a highly-usable customer collections "environment." Referring more particularly to Figure 141, the customer collections environment is shown within the bottom portion of the screen. Within the top portion of the screen is displayed a Customer Invoice output display showing selected invoices of a particular customer.

The customer collections environment within the bottom portion of the screen is composed of various different panels. A "Get" panel presents aged A/R information and allows the user to retrieve invoices within the different age categories. Pressing "Get" for a particular category causes the corresponding invoices to be listed within the Invoice panel to the left, from which the user can select a particular invoice for display.

The "Get" panels also provides a get Problem/Tickler option. Each invoice may be marked with one or more problems and/or one or more ticklers. When an invoice is selected, problem codes representing problems associated with that invoice are displayed within a Problems list box. Similarly, ticklers associated with that invoice are displayed within a Tickler Log. The user can add and remove problems and ticklers to and from an invoice as appropriate.

A Contact Log is used to record contacts and attempted contacts with the customer. For example, if the customer says "Please don't call again for six

weeks," this information can be recorded in the Contact Log. Below the Tickler Log is located a financial summary of the current selected invoice. Below the Contact Log is located payment details of the current invoice. Below the financial summary panel are located text box for invoice-specific notes and invoice-specific keywords. The ability to assign keywords to record and retrieve records using those keywords is provided for the user's convenience. Below the payment details panel is located customer contact information, and to the right of the customer contact information is located a text box for customer-specific notes.

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In Figure 141, the user has selected a Get Problems option. As shown in Figure 143, a text box is then displayed listing various possible problems. To mark an invoice as having a particular problem, the user selects that problem and clicks OK. If instead the user selects Get Tickler, a text box as shown in Figure 144 is displayed listing various ticklers. To mark an invoice with a particular tickler, the user selects that tickler and clicks OK.

Referring to Figure 142, the user may also search for invoices within particular categories, regardless of whether a particular invoice has been marked as having a problem or not. The categories (e.g., "With addendums," "Replacements without credit memo," etc.) will typically have implications that affect collection. Dealing with categories of invoices in this manner increases efficiency.

Because all of the relevant information needed to perform collection, including client contact information, is captured in the database and displayed in a readily-accessible and usable fashion, the collections function can be performed by a relatively unskilled worker following a minimum amount of training. Furthermore, the collections function may be performed by one person one day and another person the next day without confusion or loss of effectiveness, minimizing the effect of sickness and/or employee turnover.

## **Accounts Payable**

The accounts payable module is designed to ensure that invoices are timely

paid but to prevent double payment, overpayment, etc., and to systematically resolve problems with invoices so that they may be paid. The payment policy may be more or less aggressive. On the aggressive side, for example, the system may provide that a vendor invoice is paid only after a corresponding customer payment has been received, thereby assuring a stable cash flow.

A vendor invoice screen display is shown in Figure 89. When vendor invoices are received, they are entered within a grid such as that of Figure 90. The invoice number and PO number are entered manually from the invoice. The payee and vendor are preferably selected from pick lists. The invoice date, total billed, tax and freight are entered manually from the invoice. For each entry within the Add Invoices screen, a vendor invoice such as that of Figure 91 is created. Based on the PO number, the system displays items sold from the MWS (with or without addendum, or possibly even multiple addendums) to which the invoice pertains.

The vendor payment process begins by an accounts payable clerk invoking a Daily Vendor Verification option. Referring to Figure 92, this option identifies all of the open vendor invoices and runs them through a "sieve" to determine which invoices are "clean," i.e., fully reconciled, and which invoices are not clean, i.e., have discrepancies. Within each the categories clean and not clean, there are numerous sub-categories arranged in order from most important to least important. A given clean invoice may in fact fall within several sub-categories, but is categorized at any given time into the highest sub-category to which it belongs. Similarly, a given invoice that is not clean is categorized at any given time into the highest sub-category to which it belongs. By double clicking on a particular category, invoices belonging to that category are displayed. Typically, the payables clerk will pre-approve clean invoices for approval by supervisory personnel having authority to approve payment. Invoices that have been approved are then scheduled by the payables clerk to a payment register, an example of which is shown in Figure 93, for payment in accordance with their respective due dates.

For invoices that are not clean, the payables clerk displays invoices from the highest sub-category, investigates each invoice and attempts to fix the particular discrepancy involved with that sub-category. The same approach is followed with the invoices of each sub-category in turn. The verification is then re-run. Some invoices may have become clean, whereas other invoices may have passed to a next-lower sub-category but may still not be clean.

Referring again to Figure 90, prior to entering invoices, the user is prompted as to which type of invoices to be entered, including as one possibility freight bills. When a freight bill is entered, the user enters the invoice number, PO number, and payee (the latter from a pick list), and instead of a vendor list, picks a carrier from a carrier list. The user is then prompted to enter a date range specifying a period to which the freight bill pertains (Figure 94). Shipping records are then searched, and freight charges for shipments with the specified carrier during the specified period are totalled. Invoice entry is then completed in the usual manner. If the invoice amount entered from the invoice equals the expected total charges, then the resulting invoice record is marked reconciled. If not, then the invoice record is marked not reconciled.

Qualification of user inputs, previously described, occurs at each entry point E1-E9 of Figure 59 but is most readily illustrated with respect to invoice entry. Figure 121, Figure 122 and Figure 123, respectively, illustrate various warning dialogs used to prevent entry of erroneous data. If entry of a duplicate invoice number is attempted, for example, a dialog such as that of Figure 121 is displayed, and the system refuses to permit the duplicate entry. If an attempt is made to enter the same invoice twice during an entry session, then a dialog such as that of Figure 122 is displayed. If the system detects that the same invoice number has been used previously but with respect to an apparently different vendor, then the user is notified (Figure 123) and may choose whether or not to proceed.

Note that each item can have only one active customer invoice and one

active vendor invoice. This feature prevents may common AR/AP errors. For example, if duplicate vendor invoices are received in relation to a single item, only one of those invoices will be matched with the item record representing the physical item. The other vendor invoice finds no place in the system.

Business rules implemented by the AP module include the following:

- 1. Items can only be billed once by a vendor.
- 2. Vendor invoices must reconcile with purchasing costs and terms (freight, tax, payment dates, etc.).
- 3. No duplicate vendor invoices are allowed. A vendor invoice is identified by a combination of vendor invoice number and MWS number. Hence, the same vendor invoice number may be billed against different MWS numbers (since some vendor's numbering systems may generate duplicate numbers), but not against the same MWS number.

Vendor verification is merely exemplary of a more general methodology for accomplishing a business task. This more general methodology allows a user to perform a business task without the need to refer to different sources of information. In an exemplary embodiment, it involves the following steps:

- 1. A classification scheme is specified, consistent with common business practice and terminology.
- 2. An algorithm is applied whereby items are classified, marked and displayed according to category.
- 3. Within a single display screen, the categorized items are displayed along with one or more user interface controls for taking action with respect to an item.

The items may be items within any of the foregoing domains—products (e.g., computer equipment), payments (e.g., vendor invoices, customer invoices, payment registers), performance (e.g., accounts), or personnel (e.g., activity sum-

maries). Furthermore, the items may be single items or groups of items (e.g., master worksheets).

Other exemplary uses of the foregoing methodology will be briefly described. Still others will be apparent to those of ordinary skill in the art.

The items may be customer invoices and the business task may be collections. The invoices may be classified into various classifications according to the reason for non-payment, e.g., never received, return requested, price discrepancy, etc. The items may be order items and the business task may be an expedite task. The items may be classified into various classifications, e.g., vendor lost order, (re)seller lost item, item damaged, wrong item, empty box, etc. The items may be master worksheets and the task may be purchasing. The master worksheets may be classified into various classifications, e.g., replacement MWS, addendum, internal use, etc. The items may be payment registers and the business task may be reporting. The payment registers may be classified into various classifications according to payee, e.g., vendor, federal government, state government, local government, service providers, etc.

#### Nightly or Periodic System Update

In addition to the foregoing business rules, or experiential constraints, implemented within each of the individual modules, recall that cross-checks between various domains are performed at intervals. Such cross-checks may be performed nightly or at other periods of low system activity. When performed nightly, the cross-check routine may be referred to as a nightly update. As a result of the nightly update, a nightly update report is generated, all or selected portions of which are automatically emailed to responsible individuals for receipt the following morning. An example of a nightly update report is provided as Appendix A.

#### General Ledger and Real-time Financials

Having described for an order the course of events in the payments domain,

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the course of events in the financial performance domain will now be described.

The most "tasking task" for most small- and medium-sized business is accounting. Accounting packages typically come in one of two flavors, packages for non-accountants that mask the complexity of generally-accepted accounting principles (GAAP) but do not provide information in "accountant-ready" form, and packages for accountants that are not readily understood or used by non-accountants. The need for real accounting documents coupled with the difficulty of producing them has necessitated considerable reliance on accountants, either outside accountants or full-time paid staff. If an outside accountant is used, the accountant brings the books up-to-date only at intervals. Even in the case of full-time paid staff accountants, the books are typically brought up to date only monthly, or at most weekly, because of the arduousness of the process. Typically, invoices are reviewed and confirmed, then manually posted, then a trial balance is run, adjustments are made, etc.

Accounting information is presented in the form of financial statements. Information about each item appearing on the financial statements is gathered in an account. An account exist for each asset, liability, revenue, expense, and category of owner's equity of a company. More particularly, the classic accounting process involves the following steps:

- 1. Analyzing business and financial transaction to determine if they affect accounts;
- 2. Journalizing transactions affecting the accounts;
- 3. Posting journal entries to accounts;
- 4. Determining the balance in each account using incoming bank statements;
- 5. Preparing a total of all the account balances, called a trial balance;
- 6. Determining whether any adjusting entries are necessary and journalizing and posting such adjusting entries;

- 7. Preparing financial statements;
- 8. Closing income statement accounts and establishing ending balances for use in the next accounting cycle.

In classic accounting practice, the effects of a transaction are not recorded directly into the accounts. Rather, they are recorded in a journal entry in a general journal, or general ledger (GL). The process of transferring the information from the journal entry to the accounts is called posting. At the end of the fiscal period, before making any adjusting entries, an accountant prepares a schedule listing all the individual account titles and their respective debit or credit balances. Following the trial balance, various adjusting entries may be required to assure that revenues are reported in the period they were realized and that all expenses are matched with the revenues they produced. An adjusted trial balance is then produced. Financial statements are generally prepared on worksheets from the adjusted trial balance. Whereas balance sheet accounts are permanent (or real) accounts, income statement accounts are temporary (or nominal) accounts. Because the data collected in an income statement account is only for the current fiscal period, the balance is not carried forward but is eliminated at the end of each fiscal period. The process of eliminating the balance in each of the revenue and expense accounts (by transferring the balance to a different permanent account) is called closing the accounts.

As a result of the cumbersomeness of the foregoing process, management processes accommodate the limited availability of accounting-derived management information. In reality, however, the need for management information is constant and ongoing, and cannot be expected to synchronize itself to the availability of accounting information without sacrificing performance.

The present software takes a different approach to financial performance activity. In contrast to typical practice in which an accountant gathers data from all departments and performs accounting functions after the fact, in the present sys-

tem, accounting functions are performed concommitant with data entry. Instead of manual posting of accounting entries, posting is automatic, either continuous or at user-specified intervals (e.g., nightly). For non-accountants, the complexities of accounting are hidden completely—users simply go about their usual activities of running the business. The automatic posting process, however, generates entries in GAAP format. Furthermore, instead of a limited number of "canned" reports, a GUI-based report-writer is provided that allows any kind of report to readily generated, either on command or on schedule. At any time, a user may simply press a button and obtain a real-time, accurate financial report.

Because posting is automatic, posted entries are not guaranteed to be correct. (Because of the stringent qualification of user entries, however, errors are greatly minimized.) Therefore, unlike conventional accounting packages, entries are allowed to be modified. In the case of invoices, for example, invoices are allowed to be modified up until the time they are paid. As invoices and other records are viewed and modified, they are flagged to be checked by a centralized GL module to determine if the modification requires an adjusting entry. If so, the adjusting entry is made automatically alongside the original entry.

Although in an exemplary embodiment the GL module is a centralized module, the functionality of the GL module may be distributed among the various modules so as to operate continuously. For example, an AR portion of the GL functionality would make general ledger entries immediately to reflect payment information as it is input, a purchasing portion would make general ledger entries immediately to reflect obligations as incurred through purchase orders, etc.

To use the real-time financial capabilities of the present system, the user sets up accounts, then assigns accounts to different line items of records within the system. More than one account may be assigned to a line item. If only one account (i.e., a single default account) is assigned to a line item and an automatic posting option is selected, then the line item is automatically posted to that account.

Default accounts are set up for various different files, such as AP, AR, cash, credit card transactions, commissions, payroll, etc., as shown in Figure 95. The manner in which these defaults are established will be described.

Accounts are set up within a chart of accounts. The chart of accounts keeps a record of each account including the name of the account, type of account, account code, etc. To add an account, the user enters information about the account within an entry screen such as that of Figure 96. Whereas debits and credits are intelligible primarily to accountants, increasing and decreasing a balance are concepts easily understood by non-accountants. Hence, when an account is first established, a button is selected designating whether the account balance is increased by a debit or by a credit. Thereafter, user may use the more familiar concepts of increase and decrease. An exemplary chart of accounts display is shown in Figure 97. Doubling clicking on a particular account results in a display such as that of Figure 98. The date of each transaction contributing to the balance is shown, together with an explanation, the journal reference number, and the amount. This screen display may be used to modify account information as necessary.

For accounts receivable, a correspondence between line items on a customer invoice and specific accounts is set up through a customer setup display, shown in Figure 99. Generally speaking, each of the different list boxes corresponds to an amount that is (or is derivable from) a line item (or multiple line items) on the customer invoice or other record. The account or possible accounts to which the amount is to be or may be posted are specified by clicking the "+" button and selecting from a pop-up list of accounts of the appropriate type. If multiple accounts are selected, one may be selected as a default account, the effect of which is explained hereinafter. If for each list box only a single account is selected and is designated as the default account (using the Set Def button), then posting is automatic and is performed on a continuous basis or at regular intervals (e.g., daily). As a result, a truly up-to-date financial report can be run at any time.

Referring to Figure 100, an accounts receivable display is shown in accordance with an exemplary embodiment of the invention. For each customer account, there is shown the GL account to which balances are posted, the current account balance, and amounts 30, 60, and 90 days overdue, respectively. By double-clicking on a balance field, transactions records relating to that balance field are displayed. For example, double-clicking on the current balance of \$2,712.75 shown in Figure 100 results in a display such as that of Figure 101. The date of each transaction contributing to the balance is shown, together with an explanation, the journal reference number, and the amount.

Corresponding screen displays for accounts payable as those of Figure 99, Figure 100 and Figure 101 for accounts receivable are shown in Figure 102, Figure 103 and Figure 104, respectively.

If the setup of accounts indicates that an amount may be posted to more than one account, then manual account distribution is required. Referring to Figure 105, a pop-up screen display used for this purpose is shown. The assigned accounts are displayed, and the user enters debits or credits for the accounts as appropriate. The effect of a debit or credit (increase or decrease in the account) is displayed as an aid to the novice user.

Referring to Figure 106, a general journal display is shown in accordance with an exemplary embodiment of the invention. For each transaction there is displayed a journal reference number, account titles and explanation, and posting reference to the account codes of the accounts debited or credited as result of the transaction. Doubling-clicking on a particular account results in a display such as that of Figure 107. The date of each transaction contributing to the balance is shown, together with an explanation, the journal reference number, and the amount.

As a result of the continuous, automatic posting activity described, once a financial report has been defined, it may be run at any time (or at scheduled times)

and is assured to be up-to-date. Moreover, it is verifiable, i.e., every supporting transaction may be readily retrieved and viewed. In an exemplary embodiment, a financial report is defined using a display screen such as that of Figure 108. The display follows a familiar spread-sheet-like format. For each line of the report, a line item description is entered. Then, in the appropriate column, the user enters either an account (by selecting from the chart of accounts pop-up), a calculation formula, or even the result of another report. When a report is run that requires the result of another report, that other report is run first. An actual report generated using the report definition of Figure 108 is shown in Figure 109.

A report, instead of being the line-time type of Figure 109, may be a trend analysis report. Trend analysis provides a powerful tool for understanding interrelationships between various aspects of a business. Referring to Figure 110, a trend analysis report is defined in similar manner as an ordinary financial report. A cell is selected and the user is prompted as to whether the cell contents is to be a local balance, a linked field (from another report), or a calculated field. In the illustrated example, local balance is selected, and the user selects an account from the chart of accounts pop-up, in this instance Cash in Bank #1. To investigate the inter-relation of different accounts, a further account would then be selected, say Trade Accounts Payable. Plot labels may be entered by the user that differ from the actual names of the accounts themselves. Referring to Figure 111, a trend frequency is then selected. In the example of Figure 111, the trend frequency has been set to daily. The trend analysis is then run and the raw data displayed as shown in Figure 112. Referring to Figure 113, various graphing options are provided. In the illustrated example, the data is presented in the form of line graphs.

Trend reports, aside from comparing one account to another over the identical period, may also compare the same account over different periods. Hence, in the case of both financial reports and trend analyses, an important feature is that the date range of the report is arbitrary. Historical data for all past periods (or at

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least a considerable number of past periods) is stored in the database, enabling reports to be run for any period of time, not just the current period.

#### Human, Group and Organization Performance

Having described for an order the course of events in the financial performance domain, the course of events in the personnel domain will now be described.

By and large, present-day work activities are based on the model of an 8-hour work day, 40-hour work week. What is tracked quantitatively is time and attendance. Actual performance, by and large, is tracked qualitatively. Although such a model may have been adequate for the industrial revolution, it is inadequate and without basis for purposes of the information revolution. Instead, the present system allows performance to be quantitatively tracked.

Referring to Figure 114, there is shown a human resource infrastructure for a virtual organization performance evaluation model. All company personnel are linked to a digital "HR backbone," including operational management (V.P.s, managers), engineering, strategic management (president), financial and legal personnel (CPA, lawyer), and staff within various departments (customer service, shipping/receiving, technical, accounting, purchasing, etc.). In concept, the HR backbone could be any information conduit. In an exemplary embodiment, the HR backbone is realized by the same integrated, Web-enabled, client/server database as described heretofore. Various functional blocks manipulate data stored within the database and form a personnel module.

Two functional blocks in particular from the basis for performance evaluation, a Measurement Factors block and a Score Keeper block. For each individual whose performance is to be tracked, a list of tasks performed by the individual is compiled, together with an estimate of what percentage of the individual's overall assignment each particular task constitutes. Using this information, the individual participates in the setting of realistic goals within various categories. These goals

are stored so as to readily accessible to the individual for frequent review. The goals in turn dictate measurement factors/parameters tracked by the "descriptive" Measurement Factors block. These factors/parameters form the answer to the question "What is the pertinent data within the database upon which to evaluate the performance of the individual?," both individually and as a team player. Suggestions received from within the organization may influence the pertinent measurement factors/parameters.

The question, "How should the data be viewed?" is answered by a group of "normative" functional blocks. These blocks generate outputs to the Score Keeper block, which measures the degree of success or failure with respect to each goal. The same outputs are input to a "presentation" block that serves to educate employees as to the effects of various normative performance measures on financial performance and on factors affecting customer satisfaction, to help employees identify trends, etc.

Customer feedback (both commendations and complaints) are preferably also be received by and input to the system. A firewall provides security for internal data and allows limited access by customers to provide feedback. Customer feedback, although not strictly objective like the other factual measures of performance tracked by the database, can be an important indicator of performance.

Referring to Figure 115, a more detailed view is shown of the kinds of data stored in the human resources portion of the database. With the exception of data relating to performance measurement factual review, the data represented in Figure 115 is static or semi-static data that changes relatively infrequently or not at all. The top portion of the figure relates to candidate data, whereas the bottom portion of the figure relates to employee data.

For candidates, data stored in the database includes personal data, previous employment data, and previous performance data. The data is obtained from the candidate and from other outside sources, and may also be made available to the

candidate, e.g., through the Web. During the hiring process, employment documents are scanned (or input directly by the candidate during the application process) into the database. For employees, data stored in the database also includes personal data, employment data and performance data. In addition, for employees, data regarding achievements and special recognition is stored.

Performance measurement factual review is dynamic in nature and may be performed in a manner illustrated in Figure 116. Depending on the organizational level, performance measurement is either financial-oriented or assignment oriented. For branches, divisions, subsidiary companies and their parent company, for example, performance measurement is financial-oriented and uses financial analysis algorithms. In particular, using the universal financial report generator described previously, any desired financial ratio may be tracked, as well as any arbitrary combination of account codes in order to discover relationships. Cash flow statements and budget analyses may also be generated. Based on this information financial performance goals may be set and contributing goals may be accurately derived.

At the department, group and employee level, performance measurement is assignment oriented.

Referring to Figure 116, evaluation of human performance is made possible by collecting an assemblage of activity data to which analysis algorithms may be applied. This assemblage of activity data is referred to as Algorithm of Activity Data. For each different assignment (e.g., Quotes, MWSs, Customer Invoices, etc.), activity is tracked in three principal ways: quantity per period, dollar volume by period, and time between stages of completion (e.g., time from posting of quote to conversion to MWS). The relevant period is preferably user-selectable. In addition, the responsible department and the upstream and downstream departments that affect and are affected by the assignment are identified (and refined, if necessary, as experience with the system is gained). RMAs affect all assignments and

are therefore tracked in relation to each assignment. For example, quotes made during a period may total one million dollars but may have ultimately resulted in half a million dollars of RMAs.

The Algorithm of Activity Data serves as a foundation for human performance evaluation. Referring to Figure 117, for each individual employee to be evaluated, various metrics from the Algorithm of Activity Data are chosen and tracked for that employee, resulting in Employee Specific Task/Assignment Activity Data. Different aspects (e.g., quantity, dollar volume, completion times) of an assignment (e.g., Quotes, MWSs, Customer Invoices) may be chosen as metric for evaluation for a particular employee.

The Factual Performance Analysis Measurement process performs calculation on the Employee Specific Task/Assignment Activity Data, for example calculating time "deltas" between different stages of completion of an assignment. Resulting data is supplied to at least three destinations: a Measuring Algorithm, a Historical Data Comparison Algorithm, and an output display structure, indicated by dashed lines. The Measuring Algorithm compares actual performance to desired performance established by goals. Preferably, goals are set by employees in consultation with management. In an exemplary embodiment, the Measuring Algorithm compares actual performance to desired performance in three different categories: routine assignments (daily, on-going), scheduled tasks (not on-going) and special projects (typically short-lived). In addition, unique date-independent measurements may programmed, for example as alerts. For example, the user may program the Measuring Algorithm to alert the user whenever the time delta between creation of a quote and posting of the quote is seven days or greater. Various priorities may be established in accordance with corresponding parameters. For example, a particular order may be marked as critical, causing an alert to be displayed if there is any slippage in schedule.

The Historical Data Comparison Algorithm archives the daily output of the

Factual Performance Analysis Measurement and the Measuring Algorithm blocks and allows for comparison of performance data for different dates.

Within the output display structure, a hierarchy of views is presented. A first view is a complete list, based on the Algorithm of Activity Data, of departments and the tasks and projects for which they are responsible. From this complete list, the user may create the users own "c" ort list" of departments for performance review. Different layers of management, for example, may have different departments within their scope of review.

To display performance data, the user selects a department, causing performance data to be displayed for the department as a whole. The user may further select a specific individual within that department, in which case a Dynamic Personal Tracking view is displayed. The Dynamic Personal Tracking view displays all of the chosen metrics for the selected employee. From the Dynamic Personal Tracking view, the user may transition to a Factual Performance Display. The Factual Performance Display is a subset of the Dynamic Personal Tracking view and focuses on those metrics presently deemed by the user to be most important (e.g., metrics related to sales growth, metrics related to customer service, etc.)

The Factual Performance Display highlights strengths and weaknesses of the employee and is linked, either automatically or manually, to static human resources "personal growth guides." Based on the Factual Performance Display, it may be evident, for example, that the employee in question needs training in a certain area. In this manner, the system allows training efforts to be narrowly targeted where they will obtain greatest benefit. A career path may be charted for each employee that is calculated to maximize that employee's potential.

Screen displays used for factual performance evaluation in accordance with an exemplary embodiment of the invention are shown in Figure 118, Figure 119 and Figure 120, respectively. Selection of an employee is accomplished as illustrated in Figure 118. Referring to Figure 119, performance results may be viewed

for a single period or multiple periods, with the period being user selectable (a day, a week, a month, a quarter, etc.). In the case of the single period display, performance results for various performance metrics in different categories and sub-categories are displayed, for example: Productivity (A), including quantity per period (A1), dollar volume per period (A2) and percent profit per period (A3); Quality (B), including timliness (B1) and customer credit memos (B2); and Profitability (C). In the case of the multi-period display, the same information is viewable for multiple periods but, because of display contraints, not all of the information at the same time. Rather the user selects the categories and sub-categories of interest for viewing at any particular time. For example, if sub-category A2 is selected, then dollar volume per period is displayed for all of the periods (e.g., six).

#### Percolation—Automated Low-Level Decision-Making

In order to automate a small-to-medium size business, relatively complex tasks must be automated so as to be accomplished with a few clicks of the mouse. The present system accomplishes such automation using a technique referred to herein as "percolation." Percolation involves automatically classifying records of a given type into multiple classifications for workflow processing. One or more users interact with the relational database system to take a prescribed action with respect to multiple records having a particular classification. The records of a given type are classified into multiple classifications based on "experiential" criteria having real-world business significance based on past business experience. A record may belong to a multiple categories. Records are sorted in accordance with a hierarchy of categories such that a record belonging to both a category higher in the hierarchy and a category lower in the hierarchy is sorted into a group of records belonging to the higher category. The relational database system does not allow users to take at least some actions other than the prescribed action with respect to the records. Users interact with the relational database system to change information within records, whereupon the records are automatically reclassified.

Percolation may be applied to any business function, but has found to be particularly effective as applied to PRIS (purchasing, shipping, receiving, installation and assembly), vendor invoice verification, customer collections and processing of returns. Percolation may be single-level or multi-level.

Percolation as applied to vendor invoice verification has been described previously. As was previously observed, the hierarchy of classifications is important in order to obtain the desired results. To take advantage of dynamic workflow, however, it is desirable that a user having the requisite authority be provided with the ability to change hierarchies (specify a new order of classification), both within a single level and on multiple levels. There results a very powerful ability to "slice and dice" data records stored within the database, which in turn provides for dynamic response to outside influences.

Referring to Figure 150, percolation as it applies to purchasing will be described. Sales orders resulting from quotes undergo a first level of percolation to identify sales orders on credit hold, sales orders exceeding credit limits, sales orders with customer invoices 60 days or more past due, sales orders with freight problems, sales orders with installation, sales orders with installation and/or shipping problems, sales orders with a ship group, sales orders with partial ship, etc. As a result of this first-level percolation, certain orders may be placed on hold, or corrections may be made to the order as required.

There follows a second-level percolation at the item level preparatory to placing vendor orders. Items undergo percolation to identify items with higher sales cost than sales price, items with higher purchasing cost that sales cost, items on back order with groups (install/ship), rush items, items with back order received in a "no partial" sales order, items with promotion or rebate, etc. In accordance with one aspect of the invention, such percolation in effect identifies "critical path" items for fulfilling an order, items that will take the longest to fill based on availablity, installation instructions, shipping instructions, etc.

Corrections may be made and reclassification performed until such point as the user is ready to order. The user then prepares a purchase order request, either using a default vendor determined at the time the order was placed (lowest cost vendor) or selecting a different vendor. The vendor order may then be placed by posting via the Web, or the vendor order may be posted on the Web for bid. In the latter instance, bid results are received via the Web, and the vendor order is then placed based on the bid results. The order is filled by the vendor and shipped to the reseller or drop shipped to the customer.

Note that purchasing may or may not involve vendor selection. At the time a quote is created, a default vendor is selected based on lowest advertised price. Order information may, if desired, be automatically transmitted to the default vendor. In fact, N-tier order information may be automatically transmitted to multiple corresponding vendors as described more fully hereafter in relation to supply chain management.

Referring to Figure 151, percolation as it applies to receiving will be described. Sales orders for which vendor orders have been place and that need to be received undergo a first level of percolation to identify receiving sales orders to be refused or cancelled (because of RMA, for example), COD sales orders, express delivery, sales orders marked for special tracking (e.g., call upon receipt), replacement sales orders, no partial or restricted partial sales orders with only one item, sales orders expecting back order items, sales orders with installation, sales orders without installation, inventory sales orders, supply sales orders, RMA returns expected from customer, RMA returns expected from vendor, RMA returns requiring install/de-install, etc.

There follows a second-level percolation at the item level preparatory to actually receiving items. Items undergo percolation to identify items cancelled, items to be refused, items with COD, items with express delivery, items for replacement orders, items marked back order, items in an auto-tracked sales order,

items holding up installation, items holding up ship group, RMA items needing deinstall, etc. Corrections may be made and reclassification performed until such point as the user is ready to receive. The user then starts the receiving process and, optionally, receiving status is posted via the Web or via email to selected customers and/or vendors.

Shipping percolation is in large part analogous to receiving percolation, previously described, and is illustrated in Figure 152.

Installation percolation is illustrated in Figure 153. Installation percolation may be single-level, identifying sales orders with a large quantity of installation, sales orders ready for software network integration, sales orders ready for assembling, sales orders missing one last item, sales orders with a defective component for RMA processing, sales orders with RMA waiting for vendor shipment, sales orders with RMA needing de-installation, sales orders with RMA needing reinstallation, sales orders with RMA for warranty repair (off-site, on-site), sales orders with RMA for out of warranty repair, etc.

# Supply Chain Integration/Management

The present software program provides for Web access by various business partners to all of the information relevant to the business. The software may therefore be described as Web-enabled Enterprise Resource Planning (WERP) software. The present WERP software allows for an unprecedented degree of supply chain integration/management. Referring to Figure 154, a left-hand side of the figure illustrates a sell/demand chain, and a right-hand side of the figure illustrates a supply/assembly chain. User demand information is gathered by a user following a URL link from a customer Web site. The link accesses the present WERP software. Using the software, the user creates a quote. Assuming the ordered item is not discontinued, the quote may be converted into an order. The item may be sold complete with no component assembly required, or may be sold with component assembly required. In the former instance, the order is posted to purchasing, and

the item is ordered, e.g., by communicating order information to a vendor Web site and a manufacturer Web site. In the latter instance (component assembly is required), a component file is accessed to retrieve a unique set of components for a specific item SKU. Given the order quantity, a total component requirement is determined. Within PRIS, component grouping is performed, e.g, such that multiple "child" MWSs each contain (in bill-of-material fashion) all of the components required to assembly a single one of the ordered items, and a "parent" MWS of the children MWSs contains the corresponding number of complete items. The components are ordered by, as in the previous instance, communicating order information to a vendor Web site and a manufacturer Web site.

Note that, if an item is discontinued or not available (i.e., backordered), if the items component parts are still available, the item may still be sold, the component parts ordered and assembled, and the item shipped. Equivalent components may be substituted where necessary or convenient. Also, order information may be conveyed to a hierarchy of suppliers. In the case of a computer, for example, the vendor may be Ingram and the manufacturer may be Compaq. Compaq's suppliers may include makers of microprocessors, memories, disk drives, etc., whose suppliers may include in turn wafer manufacturers, platter companies, plastic companies, etc.

One key to the type of supply chain management described is breaking down items into multiple "tiers," each successive tier including component parts for items of a previous tier, and creating a record for each component part. Supplier relationships from one tier to the next may be identified based on information that is automatically updated on a frequent or substantially continuous basis. Percolation of the type previously described may then be performed on component parts, with classification being performed on the basis of availability within multiple tiers. Availability information within multiple tiers may be obtained via the Web. If customer specified installation and/or shipping instructions are likely to

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cause substantial delay in filling an order given availability information, the customer may be contacted to see if the customer desires to change instructions in order to minimize delay. In the case of channel assembly, when component parts are received, they are assembled into items for shipment to the customer.

There results a virtual inventory system with no backorders in which the order cycle time for the entire supply chain is compressed to that of a single order (single stage of a typical supply chain).

### Web Universal Business Engagement Rules (WUBER)

Various customer-specific customizations of the behavior of the present WERP software have been described. Information representing desired customizations for a particular customer are stored in a customer file of that customer. During operation of the software, whenever customizable operations are performed, the software checks the customer file to determine how to proceed.

Such customization may be extended to embrace virtually all of the "business engagement rules," both general and industry-specific, commonly negotiated between business partners. Such business rules serve as an electronic template for specifying a customized business relationship. By providing Web access to a comprehensive ("universal") set of relevant business engagement rules, the creation and management of information-age business relationships is greatly simplified. The feature of providing Web access to a comprehensive set of relevant business engagement rules is referred to herein as WUBER ("Web Universal Business Engagement Rules").

In a preferred embodiment, WUBER not only provides for the *specification* of business engagement rules, WUBER also provides for the *enforcement* of the business engagement rules during the course of business operations. For example, during the course of a business relationship, the customer may decide that all shipments are to be made via a specific carrier. Once that carrier has been specified for that customer within WUBER, the software will not permit shipments to be

made via a different carrier.

The extent to which a customer may freely change that customer's business engagement rules may vary by customer. For some WUBER fields, all customer's may freely select any available menu choice. For other fields, bounds may be set within which the field may be changed. These bounds may vary from customer to customer. Hence, whereas an acceptable return period for one customer may be up to 90 days, an acceptable return period for another customer may be up to 180 days, for example.

New business engagement rules may be easily added to WUBER. Presently, as new business engagement rules are added, enforcement code must be manually written and added to the software program. In the future, such enforcement code may be automatically generated.

A specific example of a WUBER electronic template in table form is shown in Figure 155. Within the header row of the table are listed various customizable program tasks. Each column of the table lists various options pertaining to a particular task. Various fields of the template will be briefly described.

Various options in the Price Update column govern how products are priced and display for a particular customer. If an Activate flag is set, the options selected within the column will be enforced during operations of the software. If the Activate flag is not set, program defaults will be applied instead. Pricing may be fixed price or cost plus. The frequency with which prices are updated is selectable, e.g., daily, weekly, monthly. If a customer has obtained a quote but not yet placed an order, for example, the customer may want the quote price to not change (even if in the customer's favor) for a specified period of time. Furthermore, a price minimum update amount may be specified; for example, price changes less than a dollor (or, say, less than 1% of the previous price) might be ignored. Various other options relate to the manner in which products are displayed, for example all products, new products, discount products, products of a specific

manufacturer, etc. A Personal Product List (PPL) is a user-specific list of frequently-purchased products. A Product ID (PID) is a collection of products (usually related) saved under a single identifier.

In the Quotes column, the customer may specify which system users may create quotes, which may save/retrieve quotes, which may modify quotes, and which may submit quotes. The customer may Arther specify various limits, e.g., a per-quote dollar limit, a per-day quantity limit, a limit on the number of quotes made per day, etc. Similar options are provided in relation to Orders and RMAs. Note, however, that an important option in relation to RMAs is automatic RMA approval.

In the Service & Repair column, various options may be specified, including service contract length and service response time, whether service to occur onsite or off-site, various service charges, etc. In the Shipping column, various delivery options are specified. In the Tracking column, various options are specified regarding how customer order information is to be tracked, e.g., whether tracking by serial number is desired, as well as various tracking thresholds by dollar amount, how recent the transaction is, quantity, etc.

In the Invoice column, various options relating to invoice delivery are presented. In addition, the customer may specify a billing frequency and whether credits are to be applied to invoices, whether replacement invoices are to be issued, etc. In the Credit Memo column, the customer may specify whether credit memos are to be issued to the customer (external) or whether an internal credit is to be issued, etc.

In the Payment column, various payment options are specified, including whether the ability to retrieve payment information is desired, credit card limits (credit card purchase dollar limit and frequency limit), check information, and EFT (Electronic Funds Transfer) limits.

In the Security column, various security options are specified, including for

example, encryption, SET (Secure Electronic Transactions), security certificate, VPN (virtual private network), etc. Security may be handled by the customer on its own behalf or may be handled by the vendor. The present WERP software may in some instances be installed within the customer's firewall such that it becomes in essence part of the company.

The Access Group column is used to specify the access rights of different users. In the case of viewing quotes, for example, access may range from access only to one's own quotes (individual access), access to one's own quotes and those of user's whom one supervises (supervisory access), or universal access (in the case of a high-ranking executive, for example).

The Business Activities column is used by the customer to request that certain information about its business activities be tracked and made accessible. Such information may include, for example, the busiest order period (week, month) the slowest order period (week, month), etc.

The electronic template of Figure 155 is for the customer side of a business relationship. A corresponding template may also be provided for the vendor side of a business relationship. That is, from the point of view of a reseller, the template of Figure 155 expresses demands of the reseller's customers on the reseller. The template of Figure 156 expresses the demands of the reseller on the reseller's vendors.

A further example of WUBER is shown in Figure 160, showing a customer file screen display. Within the right-hand portion of the display, the customer is able to, via the Web, set customer-specific criteria for automatic RMA approval.

### Virtual Intelligent Guide (VIG)

As should be apparent from the foregoing description, the present WERP software is designed to minimize the impact of personnel changes. To achieve this goal, the WERP software incorporates a Virtual Intelligent Guide (VIG). The VIG:

1) defines a task path for accomplishing each functional task by interacting with the system; and 2) captures and applies employee knowledge to refine each task

path and disallow errors. The result is to enable relatively unskilled personnel to quickly become proficient at performing complex functional tasks in a simple manner using the software. An example of VIG was described previously in relation to accounts payable. The same model may be applied to accounts receivable, RMAs, sales, PRIS, etc.

#### **Tracking Prospective Customers and Vendors**

Customer and vendor files may be provided not only for existing customers and vendors but also for prospective customers and vendors. In the case of vendors, prospective vendor files provide a mechanism for capturing the knowledge of buyers in purchasing and of minimizing the impact of personnel changes. In the case of customers, prospective customer files facilitate sales force automation as will be presently described.

#### Sales Force Automation

During sales calls, a salesman will often be asked various question about particulars of various business transactions. If the salesman happens to know the answer, the salesman can answer immediately. More typically, the salesman doesn't know the answer and is forced to reply "I'll have to get back to you on that." "Getting back to you" will usually take days and may even take weeks, or may simply not happen at all. Current sales force automation software does little to address this situation.

The present WERP software provides the ultimate sales force automation tool. Instead of "I'll have to bet back to you on that," the salesman can instead say "Let's check on that." The salesman may then immediately use the Web to access the information needed to answer the customer's question. Web access may be through a desktop or laptop computer, either wired or unwired, or may be wireless through a handheld or palmtop computer. Alternatively, connection to the Web may be made prior to a sales call to download for a particular customer—all of the records, the most recent records, or some other subset of particular interest.

In addition to the foregoing functionality, various features of existing sales force automation tools may be added to the present WERP software, including such features as contact management (contact profile, contact history), account management (account information, outstanding and historical activities, order entry, order history, lead tracking, sales cycle analysis), sales force management (expense reporting, territory assignment, activity reporting, special events tracking), time management (calendar, single and multi-user scheduling, to-do lists, ticklers, notes, timestamps), telemarketing (call list assembly, call recording, call planning, call reporting), customer service (request assignment, tracking and reporting, order status and tracking), etc. All of these functions can be performed "on-the-fly," in real-time with up-to-the-minute information. This real-time operation is made possible because the underlying data is the same item sold/item detail data used throughout the system, simply viewed from an SFA perspective.

Figure 157 is a block diagram of a client/server business automation system in which a common database supports both end-to-end business process automation and sales force automation.

Referring to Figure 158, the sales force automation capabilities of the system of Figure 157 are represented in greater detail. A sales force automation module combines known sales force automation functions with additional functions made possible only by the end-to-end business process knowledge base stored in the single database described previously.

Known sales force automation functions include, for example, activity logging (actual time and data of daily activites by customer), intelligent notes (sortable and editable), and triggers (reminders) for follow-up calls, major opportunities, etc. The functions are supported by a summary display (drawn from the customer file) used to display contact information for customers by department and title. Various other functions may also be provided.

An expense reporting function is also provided. Unlike conventional sales

force automation tools, however, expense information is combined with compensation information stored in the database in order to gain a complete picture of the profitability of a saleman. Based on profitability, a rewards structure may adjust the compensation of the salesman and provide performance feedback to the salesman through the sales force automation module.

Forecasting information may also be displayed to the salesman through the sales force automation module. Because the database stores complete historical transaction information, a sales forecast can be readily compiled based on the historical base. Other types of forecasts can also be compiled. For example, market projection information may be entered into the database (downloaded or entered manually), and based on this information, a forecast can be compiled. A forecast can also be compiled based not only on current customers but based on prospective customers. Such a forecast provides additional motivation for a salesman to convert prospective customers into actual customers.

Information from WUBER may also be displayed to the salesman through the sales force automation module. When a new salesman succeeds a departing salesman, the new salesman, by consulting WUBER, can readily learn the established business engagement rules for a particular customer.

Information from the human performance module may also be displayed to the salesman in the form of an activity summary display. In an exemplary embodiment, activities in various categories (columns) are quantified (rows) in dollars where applicable (for both sales and purchase orders), in quantity where applicable and in duration where applicable. For example, dollars sales, dollars purchase orders, and unit volume (quantity) are displayed for the previous year, the present year, and for the previous month, as well as for the peak month (max.) and the low month (min.). In other categories, e.g., ship-to-date and payment history, an average time in days is displayed, between the time an order is placed and shipped and the time an invoice is sent and paid, respectively.

An example of a screen display for Sales Force Automation is shown in

### **Purchase Requisition Budget Forecast**

Orders, represented by MWSs, may be for resale or for internal use. A field within the MSW record distinguishes the type of MWS, including whether it is for internal use. Just as historical analysis and forecasting may be applied to customer sales, these same techniques may be applied to internal sales. The cycles of pinch/spend that often afflict corporate departments may therefore be avoided. Managerial personnel are able to determine easily in real time how much of a budgeted amount has been spent and how much remains to be spent.

### Comparison With Known Workflow Systems

In contrast with known workflow systems, the present system, sometimes referred to hereinafter as the ICE<sup>TM</sup> (Internet Commerce Equalizer) system, represents a purpose-built application suite where all applications are both physically implemented and logically rational source or target applications in a Dynamic Workflow<sup>TM</sup> Environment

The ICE system may be described as a broad-spectrum suite of Internetoptimized business applications, that are designed and built to permit the implementation and execution of workflows without the mandatory parameter setting,
software switch setting, customization and workflow preparation common to all
other workflow environments. This is made possible by several, simultaneous
development and runtime environment characteristics and by several carefully
considered simultaneous application design and development practices.

To appreciate the difference between the ICE system and conventional workflow systems, the background of conventional workflow systems will be briefly described.

Arguably the origins of workflow are as ancient as the origins of industry. In modern industry, workflow has taken the form (under different names) of the assembly lines of Henry Ford, or as the doctrines of time and motion as formalized by industrial theorists like Taylor and Gilbraith.

Very recently, (the 1980s) workflow has appeared in computing and office automation in the form of task-based menus and wizards. Most recently, (the mid-1990s) workflows have taken the form of environments that tie ordinary business applications together into larger, structured super-applications that consist of applications tied together in a workflow definition environment driven by workflow "engines."

These environments have the capability of performing state-transition or branching logic in contrast to the more mundane task-based menus. And unlike wizards which are normally used for intelligent installation procedures, workflows are usually used to support the structured execution of routine business applications.

Examples of such environments could include SAP's workflow operating in the Dr. Schier<sup>TM</sup> graphical workflow environment or Baan's Dynamic Enterprise Modeling running in the COSA<sup>TM</sup> environment. And, these environments have one common heritage with workflow of the past. Notwithstanding words like "dynamic" in their names, these environments are inherently static.

Static is used to mean that once a workflow has been built and implemented in any of these workflow environments, it stands as a defined super-application. To execute a workflow in any of today's existing workflow environments that has not been previously defined, prepared, and implemented is not possible. A user attempting to do so would find himself in the same position as a factory worker who attempted to execute an assembly procedure off the assembly line. He would find himself without resources or the means to execute any procedure for which a physical infrastructure had not yet been created.

The ICE system has a true dynamic workflow environment. This means that the users of the ICE system can go places with the application even when the metaphorical steel rails of an assembly line have not yet been built there.

In order for this to happen, the ICE environment must be fundamentally

different from competing pre-defined, structured workflow environments. The basis of this dynamic flexibility and the goal of all recent design efforts is the enabling of all ICE applications as potential sources or targets in a workflow.

This potential must be inherent, and not the result of extensive preparation, switch setting, or parameter setting of older-generation applications. It does not even matter if this preparation is largely automated in a separate (static) definition and development environment, because such relative ease of building workflow scaffolding is qualitatively different than not requiring scaffolding for workflow mobility in the first place.

Real-world business users of older-generation enterprise applications have made comments like, "it's like taking off handcuffs," to navigate and solve business problems in the ICE system. Dynamic Workflow means that the user is not bound to one pre-defined way of doing a business procedure or of solving a problem.

Of course, the ICE system can enforce business procedures (in fact most routine business procedures in the ICE system are completely automated) and of course the ICE system is capable of enforcing GAAP and APICS standards in accounting and manufacturing. But wherever possible, the ICE system gives the user a choice even as it automates routine procedures. And when it comes to exception handling, the Dynamic Workflow environment in the ICE system saves significant time and effort.

In ordinary ERP and business systems, sequences of applications known as workflows are built up using specialized development environments. As with any other application, workflow or subsystem that is built up from either lines of code or from higher level components or applications, nothing exists that has not been previously defined and built.

In other words, to execute a particular workflow, someone must first implement it. The implementation system must follow strict rules and in many

cases perform complex re-configurations of the workflow applications so that they are properly enabled as "source" or "target" applications. The workflow environment starts out either as a template of other pre-existing workflows, or simply as a blank slate on which to build the workflows that are to eventually be executed.

In the ICE system, by contrast, it is possible to navigate a comprehensive "web" of applications in any way needed by the user, with each and every application already a potential source or target application to every member of the navigation web.

A unique feature of the ICE system is its capability to support Dynamic Workflow. Dynamic Workflow may be described as follows:

- Conventional workflow starts with a blank slate and then builds up
  the workflow from individual applications or components. Even
  when workflow templates are used those templates simply specify
  which components are added by default to the blank slate.
- In conventional workflow systems, applications must be carefully conditioned, parameterized, and otherwise programmed to work together in a specific workflow, because they must often pass messages, passed parameters, or transactions between them. Those transactions must be data-type and business-rule-logic compatible.
- The applications that comprise a workflow will rarely work outside of the specific work flows they were designed for. This is because in conventional application systems the applications work more or less independently and are typically constructed around one or more specific (and independent) data files.
- This means that work flows must be constructed just like applications. Nothing is executable unless it has already been defined and implemented. The only difference is that applications are built up from routines and workflows are built up from applications. Workflows are simply hyper-applications that are built from components at a coarser level of granularity and a higher level of abstraction than the individual applications that make up the workflows.
- Even the most sophisticated and flexible of the existing workflow systems require active developer, designer, analyst and system-support intervention before the workflow can be implemented.
- Conventional workflow works as a "start with nothing and build" method. No application-to-application pathway exists unless and until

it is actively implemented.

The ICE system has a number of architectural characteristics that when combined, produce a unique Dynamic Workflow execution environment:

- It is a characteristic of the ICE architecture that all applications are object-based methods that interface with a unified, synchronous, "solid-state" database.
- These methods are written in such a way that most of them can be safely invoked in any order. Because these methods are actually only different logical views of the same "solid-state" database, any changes made by one method to the "solid-state" database, are simultaneously, instantaneously, and synchronously virtually "posted" to all other methods, in the ICE system.
- It should be noted that this posting is strictly virtual. No physical parameter passing is done and none is required, because there is only one database operating under strict rules of commit control. All database updates are accomplished synchronously, and under the protection of internal database commit control such that any data update is instantaneously and simultaneously propagated through any view that sees that data.
- In contrast to workflow systems where business objects are placed on a blank slate, and where no workflow exists that has not been previously defined, the ICE system is a web of business functions (methods). Potential connectivity and application-to-application workflow are universally present.
- This permits a "start with everything and set guidelines" workflow model.
- Normally, in the routine user interaction with the ICE system, routine, pre-defined business workflows are followed, and these are documented and programmed into the system as user guidelines, task-based menus, wizards, or procedures. Workflows may also be defined with state-transition intelligence, such that a particular data entry value will result in changing the next application along the application path.
- At end-user security levels, these procedures can be defined so that any change from a normal business procedure requires supervisor approval.
   User roles, rights and authorities can be comprehensively managed.
- However, if an exception condition arises, the user of the system has
  the option of invoking whatever necessary relevant application is
  required, with the assurance that data integrity, data consistency, and in

most cases, business rules will not be violated.

- Occasionally, management or supervisors will want to change business rules on purpose, and this can be done at a high enough level of supervisory system authority.
- Furthermore, all workflows in the system and the applications that comprise those workflows are structured in such a way that the workflows can readily be reversed at any time. An example would be when a sales situation turns into an RMA. In such a situation, the same workflow can be changed into a reverse workflow at any stage by simply reversing navigation.
- It should be noted, that whenever necessary, rational business rules can be overlaid on top of this "universal navigation Web" as would be the case if the invocation of a method results of posting the general ledger.
- In such a case, business rules dictate that the original posting general ledger must remain intact, and the corresponding opposite entry must be made. Even when such exception conditions are defined, universal navigation of the system is still possible if the user has a high enough level of authority.
- By creating a workflow environment where nearly any business method invocation sequence can be followed without violating system integrity, the ICE system has achieved a new level of system flexibility and the ability to respond to business contingencies.
- Even in the most flexible conventional workflow systems, situations arise where new methods need to be inserted into a workflow sequence, or other methods need to be removed, or an alternate method substituted for the original method. In a conventional workflow system, the new procedure must be defined, the applications properly prepared, through the setting of parameters and switches, and then the workflow must be tested.
- In such a situation, both application logic and database changes can have a negative "ripple effect" throughout the system often requiring extensive impact analyses.
- Obviously, this process is time-consuming, and is not practical for response in a contingency or exception situation. In the ICE system predefined workflows are set out as guidelines for normal business procedures such as order entry. At the same time, the user is able to override these guidelines whenever necessary. It means that the system can respond dynamically to changing business conditions.
- While it should be emphasized that the system does not create applica-

tion functionality or business methods were none existed previously, it should also be emphasized that the system is capable of dynamically adapting business workflows to ever-changing conditions. This allows the ICE system to respond dynamically to business impacts.

- Even where new methods are required to support previously undefined and non-implemented business method functions, the developer workload to create such new functions is greatly reduced in the ICE architecture because of its natural immunity to ripple effect. A new business method has zero impact on all existing business or future new business methods, and any additions to the database have zero impact on all existing or future new business methods.
- Even in the rare instance of a change to the database, automated data
  type declaration and synchronization in the ICE development environment allows the rapid, comprehensive and automated update of all the
  business methods in the system. This is an extremely powerful feature,
  and a necessary one because in order to be intrinsically workflowenabled, all ICE applications must conform to the same data integrity
  and consistency rules.
- In practice much of the work of creating workflows in standard workflow environments consists of analyzing and controlling ripple effect, achieving project scope control, and conditioning the existing applications to work in the workflows that the designer wishes to implement. The ICE system eliminates these traditional bottlenecks to workflow development.

The foregoing discussion has focussed on the background, rationale and benefits of Dynamic Workflow. The following discussion will focus on keys to Dynamic Workflow in the ICE sytem.

• Eliminate the need to pass physical transactions or parameters between applications

An important purpose is served by eliminating the requirement to pass physical transactions or parameters between applications. Much of the conditioning and preparation of conventional workflow systems involves detailed data type checking and transaction matching from a source object to a target object. This is true whether the source object is a "pure" object or a hybrid object consisting of a more conventional database table and corresponding application.

If all the applications in an application system are actually methods that act

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on a unified "solid-state" database, and if all data type checking is done centrally, then one major source of potential application incompatibility is eliminated. This is exactly what is done in the ICE system. The ICE system is developed using a RAD environment (e.g., 4D from ACI, Inc.) that is capable of performing automated, centralized data type checking and declaration.

In fact, in the ICE system, data or parameters cannot be passed to any ICE application because once any data in the ICE system are updated, they are already in any and every method or view in the system. While this architecture could conceivably create currency problems and scalability limits in very large implementations, presently, no single ICE instance is designed to support more than a hundred or so users. Thus, ICE can operate on a "solid-state" instance of persistent data.

In this environment, data integrity rules are enforced by conventional RDBMS mechanisms. In fact, the ICE data model can be deployed as an Oracle database for example. Data consistency cannot be violated either because of all ICE applications share identical data consistency rules. Business rules are guided (not enforced) by a combination of application logic and workflow.

ICE can be and is coded to enforce certain business rules without exception. These would include things like double entry bookkeeping transactions. In all other cases however, the user with a high enough level of authority can invoke applications in what ever order suits the business case.

• ICE applications are coded to "open navigation Web" standards.

Every ICE application is written as if it could be invoked by any other application in the ICE system, and contains the navigation infrastructure and user enabling to support the invocation of any other application in the ICE system. With very rare exceptions, which are only made to conform to certain accounting or business restrictions, this is the actual case.

For the purpose of facilitating the execution of routine business processes, task-based, conventional workflow, and automated procedures or agents can be

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used. The big difference comes in when it becomes necessary to override an established procedure, or possibly even create, on-the-fly as it were, new procedures or exception-handling workflows.

One metaphor that describes the ICE system workflow in contrast to conventional workflow is that conventional workflow presents the implementation staff with a blank slate on which all workflow constructs must be implemented before they can be used. The ICE system presents the users with an open white board of potential navigation paths that are typically defined by navigation guidelines.

Regardless of which ICE application a user happens to be in, a direct navigation path exists to any other ICE application. When the user gets there, the user can almost always perform meaningful create, read, update, or delete operations on the data that they see through the new "window" that they have chosen.

Furthermore, each ICE application is written at a much broader level of granularity than the typical application in a conventional system. Each view in the ICE system encompasses what would normally be two or three levels of drill down in a conventional system.

Even the "fast path" user in a conventional system typically cannot make any changes to the data that they access through the manually invoked applications, without potentially violating one or more business rules. In any case, the user of a conventional system is looking at data that were designed to be stored either as unit records or as the rows of data in a relational database designed to be displayed on one 80 column by 24 line screen.

This is true even in systems that have been retrofitted with modern graphical user interfaces. In such systems, the graphical user interface is an aesthetically pleasing overlay on top of applications and data definitions that were designed to completely different standards.

The following table first lists in **bold** some of the primary architectural

characteristics that distinguish the ICE system from conventional workflow systems. The rest of the table lists some of the consequences and spinoffs of this architecture.

Fundamental conven-	Fundamental ICE™	Fundamental benefits of
tional workflow archi-	architectural character-	ICE™ are in bold
tectural charactistics	istics are in bold	IOL are in bold
E Company of the Comp	istics are in bold	
are in bold		
Fixed, static binding naviga-	Open Navigation	Enjoy the flexibility of Inter-
tion Individual applications pri-	All applications are actually	net browser-style navigation No data type mismatches or
marily maintain individual	object-based methods that	errors are possible, mes-
tables, or as in the case of	view the same synchronous	sages, parameters and trans-
"unified database" products,	database	actions are passed virtually,
separate data areas	database	not physically eliminating
Separate data dicus		transaction errors
Multiple independent data	One logically "solid-state,"	One update by one user
tables typically supported by	synchronous database	using one business method
multiple relational database	-,	simultaneously and instanta-
instances		neously "posts" that update
		across all users and all busi-
		ness methods
E-commerce and Internet	E-commerce and Internet	Both user navigation and
enabling typically a retrofit or	architecture is intrinsic to the	inter-system communication
add-on	ICE™ (Internet Commerce	are fully internet enabled
	Enabler) architecture	
Applications must be retrofit-	ICE™ applications (business	All business processes are
ted and customized to work	methods) are designed,	reversible, flexible and exten-
in the workflow environment	architected and written spe-	sible. The user has the func-
because they were originally	cifically for the workflow	tional equivalent of a
written to be either stand-	environment. Every busi-	browser "back button," as
alone or conventional task-	ness method is a potential	well as a routine workflow
based menu driven applica- tions	source and/or target method	"forward button." The poten-
uons	to every other method.	tial navigation web is a 3-
		dimensional geodesic of business methods
Applications tend to be frag-	Applications are written at a	Applications have a central
mentary. In order to see all	much broader level of granu-	function with multiple over-
relevant data, several layers	larity. Although underlying	lapping functions or data dis-
of drill down are provided	synchronous data is stored	play. It becomes
, , , , , , , , , , , , , , , , , , ,	internally as 3NF relational	immediately apparent to a
To the state of th	data (no repeating groups,	user where they might need
	elements or foreign key	to move to place the data
: 	dependencies), users can	they want to primarily manip-
	see (and manipulate) at least	ulate in the center of their
	2 and usually more "drill-	chosen "data window." Fur-
	down" levels at once.	thermore, that movement is
	-	always possible.
Secondary characteristics	Features:	Benefits:
follow:		
Start with nothing and then	Start with open "go anywhere"	Users spend time on business
implement business functions	navigation and define business	process definitions, not on
as necessary	process guidelines as neces-	implementation mechanics
	sary	·
· · · · · · · · · · · · · · · · · · ·	<del></del>	<u> </u>

	<u> </u>	
Business process and best	Business process and best	Much less chance for errors.
business practice templates	business practice templates	Much greater flexibility of navi-
contain applications lists, state	contain business method navi-	gation and execution if the user
transition rules and extensive	gation guidelines and state	needs to go beyond the bound-
application configuration	transition rules only	aries of the predefined workflow
switch, parameter, and data		,
compatibility information		
Just because an application	All applications are actually log-	Data cannot get out of synchro-
works in workflow "A" does not	ical methods that view the	nization. The results of busi-
necessarily mean it will work in	same synchronous database	ness actions can be seen right
workflow "B"	and are compatible	away.
Applications must "know" they	Applications do "know" or	Skipping a step, navigating to
are part of a workflow and won't	"care" if they are part of a work-	an alternate step or viewing
work unless properly prepared	flow or not	results won't corrupt the work-
		flow
Workflows are logical and phys-	Workflows can act as if they	Ripple effect is eliminated,
ical super-applications made up	were super-applications but	implementation time is greatly
of a number of sub-applications	workflow architecture is logical	reduced, users can concentrate
	only	on business solutions, not
	•	implementation mechanics
Adding or removing an applica-	Adding or removing an applica-	
tion from a workflow has a sig-	tion changes the logical out-	
nificant impact on the workflow	come of a workflow but has no	
and on the applications the	effect on the other applications	
workflow contains	in that workflow	
Implementing a workflow	Implementing a workflow	
requires development and test-	requires a rational business	
ing	proposition	
Exception handling workflows	Exception handling conditions	
must be anticipated or their	can occur, require the ad hoc	
need encountered and then	execution of a previously unex-	
they must be developed before	ecuted workflow and optionally	
they can be implemented	be formally defined	
Conventional ERP and other	ICE™ applications are meth-	Several potential sources of
business applications must	ods that view the same, syn-	error are eliminated, particularly
support physical message and	chronous database. Physical	data type and transaction for-
parameter passing	transactions and parameters	mat mis-matches
	are not passed.	
Most conventional workflow	ICE™ applications cannot be	Far greater flexibility of naviga-
implementation errors occur	further configured for workflow	tion, fewer errors, faster
because of application configu-	because they are already	response times
ration and transaction data	designed and implemented for	
errors	workflow; transaction data	
	errors are impossible because	
	all applications are already	
	viewing the same synchronous	
	data	
A workflow may be reversed	A workflow may be reversed at	A business process may be
(e.g., change an order into a	any time by choosing a reverse	reversed without needing to
return) by completing the order	navigation path.	complete the first process and
workflow and then invoking a		then to complete a counterbal-
return workflow		ancing process

A management evered at a		
A management override of nor- mal workflow procedures that		It is possible to perform unfore-
has not been thoroughly tested	mal workflow procedures	seen tasks or to prepare non-
ricks violeties businessed	involves invoking alternate	conforming (to any existing
risks violating business, data	business methods which all	workflow) quotations, pro for-
consistency and in some	obey the same data consis-	mas or bids. Entire transaction
cases, even data integrity rules	tency and integrity rules. Even	sets may be duplicated or re-
	apparent violations of business	routed to additional customers
	rules (e.g., create a fictitious pro	in a zero programming, zero
	forma order with no customer	workflow engineering environ-
	and missing suppliers) will not	ment
	corrupt data integrity or consis-	
Accounting sules /s Of the	tency.	
Accounting rules (e.g. GAAP	Accounting rules (e.g. GAAP	
required dcuble-entry book-	required double-entry book-	
keeping and transaction preser-	keeping and transaction preser-	
vation) must be externally	vation) are enforced by	
enforced through workflow,	workflow and business method	
business and data consistency rules	rules at point of entry	
Even in so-called "dynamic"	In ICE IM all bus	
workflow modeling systems,	In ICE™, all business methods	All ICE™ workflows potentially
the actual workflows are stati-	are, in the object-based sense,	exist as un-executed but possi-
cally bound to the operating	dynamically bound to the oper-	ble entities
environment	ating environment	
By the time an exception solu-	Any worknow is already poten-	Instant soon and the second
tion is implemented in a con-	tially implemented in ICE™.	Instant response to exception conditions
ventional workflow	When an exception arises, it	Conditions
environment, conditions caus-	can be dynamically responded	
ing it have already have	to.	
changed (e.g., the customer		
may not be a customer any-		
more!)		1
Conventional workflow applica-	ICE™ applications are actually	No further setup or conditioning
tions are ordinary task-based	logical views and methods that	of applications is necessary in
menu style programs adapted	are initially architected and pur-	order to perform workflow func-
to an externally imposed work-	pose-built to operate in a	tionality
flow framework A major source of error in con-	dynamic workflow environment	
ventional workflow systems is	All ICE™ methods are logical	All data in all applications for all
data type mismatches	views of the same physical and	users is always current. Data
data type mismatches	logical database—data type	integrity and consistency are
	check errors are literally impos-	enforced in one place
Data types (e.g., packed,	sible Data types are automatically	
numeric, zoned, alpha, bitmap)	synchronized and reconciled in	
must be declared by a devel-	the ICE™ development envi-	
oper		-
·	ronment—any and all type declarations when necessary are	
	strictly automated	
Conventional development	The ICE™ development envi-	
environments have separate	ronment automates data type	
tools to enumerate change or	reconciliation and optionally	
enhancement impact. Adding	can report the changes an	
an application can impact much	enhancement may have	
of the existing system.	caused. All applications use	
	the same data consistency	
	rules	

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Conventional ERP system architecture must be capable of supporting Fortune 100 enterprises. Smaller implementations must carry the design overhead of these architectures	ICE™ is designed and optimized for business instances requiring less then 125 GB of live transactional data and is able to radically reduce complexity and overhead (this does not rule out supporting multiple ICE™ instances in a single	ICE™ is optimized for your business, not for a multi-billion dollar multinational. You don't pay for all that overhead either in license and consulting fees or in performance
Any business method in a conventional workflow environment is a physical application that must be selected and adapted as a sc urce and/or target application in the workflow	enterprise)  Any business method in ICE™ is potentially either a source or target method to all other methods in a read mode, and is a logical source or target to most other methods in a create, update or delete mode	
Workflows are strictly uni-directional except for branches and loops. Even so, the workflow must end at a predetermined ending point.	Workflows are all potentially bi- directional. For example, an order entry workflow may turn into an RMA (return material authorization) at any point sim- ply by taking the reverse navi- gation path.	

It will be appreciated by those of ordinary skill in the art that the invention can be embodied in other specific forms without departing from the spirit or essen tial character thereof. The presently disclosed embodiments are therefore considered in all respects to be illustrative and not restrictive. The scope of the invention is indicated by the appended claims rather than the foregoing description, and all changes which come within the meaning and range of equivalents thereof are intended to be embraced therein

## APPENDIX A: NIGHTLY UPDATE REPORT

Subject: MegaNetworkNightly report (12/18/98 10:45 PM)

Sent: 12/19 6:39 AM Received: 12/18 10:44 PM From: MegaNightly@meganetwork.com charles@meganetwork.com To: iohn@meganetwork.com kenny@meganetwork.com kim@meganetwork.com wendy@meganetwork.com won@meganetwork.com \_\_\_ No reminders today \_\_\_\_ ------ Nightly Update Reports Follow ------All MWS numbers are in sequence. No MWS cancellation problems were found The following sales records had ord/rcv/shp date problems which were repaired successuily. No other date problems found. M98-28538 11/5/98 No MWSs with unit X qty price/cost problems were found. The following sales records have items that are received and not shipped. M98-28619 12/7/98 NoPartial UNION BANK OF CALIFORNIA M98-28632 12/9/98 NoPartial UNION BANK OF CALIFORNIA M98-28633 12/9/98 NoPartial UNION BANK OF CALIFORNIA M98-28639 12/11/98 NoPartial UNION BANK OF CALIFORNIA

M98-28640 12/11/98 NoPartial UNION BANK OF CALIFORNIA M98-28657 12/17/98 NoPartial UNION BANK OF CALIFORNIA M98-28658 12/17/98 NoPartial UNION BANK OF CALIFORNIA M98-28660 12/17/98 NoPartial UNION BANK OF CALIFORNIA M98-28662 12/17/98 NoPartial UNION BANK OF CALIFORNIA

The following shipping records shipped in the last 7 days have defualt manifest frt totals.

```
11/23/98 UPS Pickup#: 99076868
11/24/98 CALL TAG Pickup#: 502960111
12/1/98 CALL TAG Pickup#: 504632811
12/4/98 0306-243219- Pickup#:
12/11/98 UPS Pickup#: 200 monitor
12/14/98 UPS Pickup#: 990768
12/14/98 UPS Pickup#: 990768
12/14/98 SECURITYEXP Pickup#: F71649
12/14/98 SECURITYEXP Pickup#: F71650
12/15/98 SECURITYEXP Pickup#: F71651
12/15/98 SECURITYEXP Pickup#: F71652
12/15/98 UPS Pickup#: 990768
12/16/98 SECURITYEXP Pickup#: F71653
12/16/98 SECURITYEXP Pickup#: F71654
12/16/98 UPS Pickup#: 990768
12/17/98 UPS Pickup#: 990768
12/18/98 UPS Pickup#: 990768
```

The following RMAs have date or qty problems and were NOT fixed.

R-272186CR 7/24/97 R-274615XDM 8/12/97 R-292761CR 12/22/97

No RMA credit problems were fuond.

The following RMAs have been received from customers in the last 30 days and need credit memos.

R-321917CR Invoice: 12/1/98

R-322083CR Invoice: 12/15/98 R-322118CR Invoice: 12/16/98 R-322267CR Invoice: 12/15/98

No RMAs have been received from customers in the last 30 days that need replacement MWS attention.

All customer invoices that have been printed have been issued.

The following customer invoices are issued and not printed. \*=Old

*17803	3 Customer	UNION BANK OF CALIFORNIA 12/8/98 Paid in full
*17827	' Addendum	UNION BANK OF CALIFORNIA 12/14/98 Paid in full
*17828	Addendum	UNION BANK OF CALIFORNIA 12/14/98 Paid in full
*17829	Addendum	UNION BANK OF CALIFORNIA 12/14/98 Paid in full
*17845	Customer	SOUTHERN CALIFORNIA EDISON 12/16/98
*17857	Customer	SOUTHERN CALIFORNIA EDISON 12/18/98
17858	Customer	UNION BANK OF CALIFORNIA 12/18/98
17859	Customer	UNION BANK OF CALIFORNIA 12/18/98
17860	Customer	UNION BANK OF CALIFORNIA 12/18/98
17861	Customer	UNION BANK OF CALIFORNIA 12/18/98
17862	Customer	SOUTHERN CALIFORNIA EDISON 12/18/98

All items shipped in the last 30 days have been invoiced.

The following customer invoices were found to have commission problems:

M97-25714 10/15/97 for Charles commission & invoice GMs are different.

17843 M98-28645 12/16/98 for VERNON commission & invoice GMs are different.17843 M98-28645 12/16/98 for KIM SEALE commission & invoice GMs are different.

Commission dates were all found to be valid.

All customer invoices issued in the last 90 days have 2 commissions.

No duplicate vendor invoices were encountered.

All vendor invoice billed amounts equal payment register totals.

All items received in the last 30 days have been fully shipped.

The following MWSs have in house items that need to be ordered and/or received.

M98-28657 12/17/98 M98-28658 12/17/98 M98-28659 12/17/98 M98-28660 12/17/98 M98-28662 12/17/98 M98-28663 12/18/98

All items on hold or cancelled are not on a payment register.

All Vendor Payment Register payment amounts match Ven Invoice payments.

All Vendor Payment Register credit amounts match Ven Collection amounts.

All Vendor Payment Register Credits have been issued properly.

No PrePaid Vendor Invoices were found on Non PrePay Vendor Payment Registers.

The following vendor credits have possible duplicate expected credits.

Exp-4478 00/00/00 Invoice: Exp-5185 00/00/00 Invoice: 50-10686-21

All expected credits have an invoice assigned.

All Vendor Invoices have payment schedules that match the Invoice total.

All Ven Invoices are assigned to an AP Invoice Register.

All Ven Collection records are assigned to an AP register.

All Paid Ven Invoices are assigned to an AP Payment register.

All used Vendor Credits are assigned to an AP Payment register

The following MWSs have shipped in the last 30 days but are NOT fully or over invoiced, or not printed.

\*= New

*M98-28573	Customer	SOUTHERN CALIFORNIA EDISON Unprinted invoices
*M98-28647	Customer	SOUTHERN CALIFORNIA EDISON Unprinted invoices
*M98-28649	Customer	UNION BANK OF CALIFORNIA Unprinted invoices
*M98-28651	Customer	UNION BANK OF CALIFORNIA Unprinted invoices
*M98-28652	Customer	UNION BANK OF CALIFORNIA Unprinted invoices
*M98-28653	Customer	UNION BANK OF CALIFORNIA Unprinted invoices

No customer invoice tax problems were found.

All unissued customer invoices were successfully issued.

The following Customer Credits have no tax and are taxable.

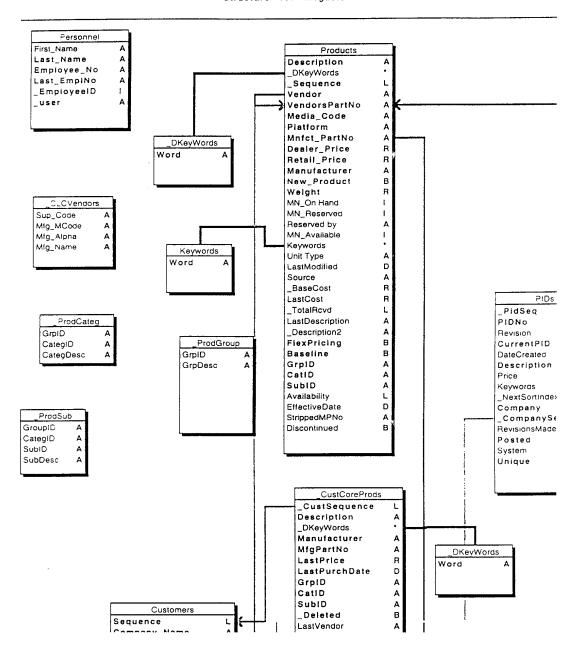
CM-10432-2-10 5/15/97 Restock

Won Choi Mega Network, Inc. Phone:(408)730-9138 x839

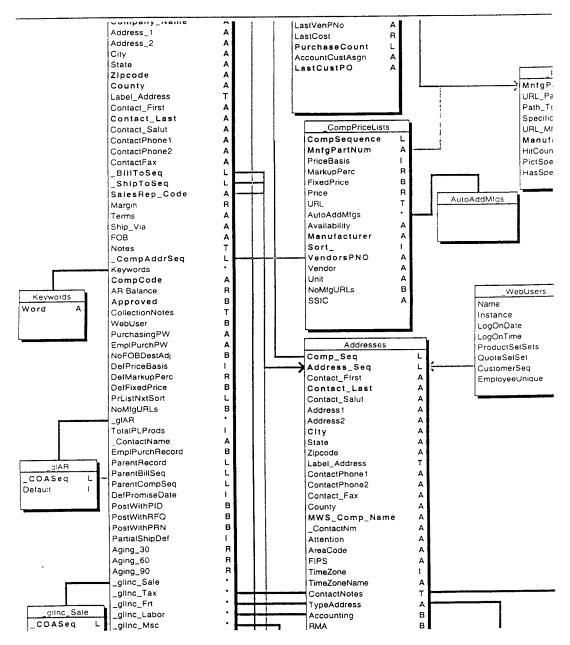
Fax:(408)720-1293

won@meganetwork.com

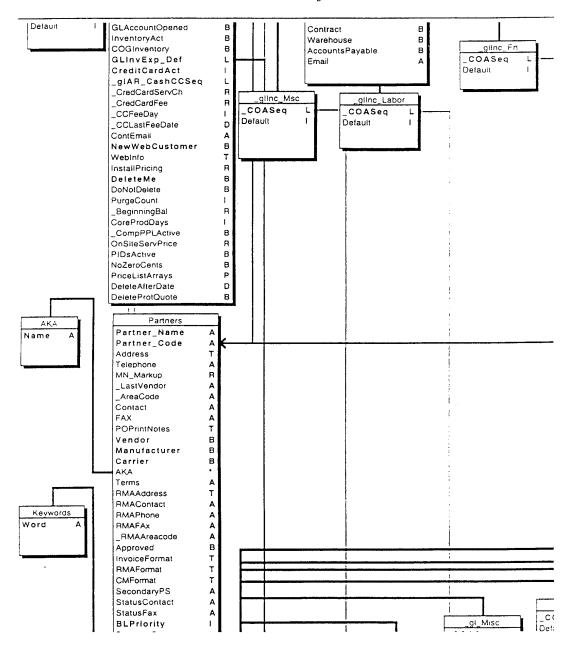
Structure for Mega3.5.4



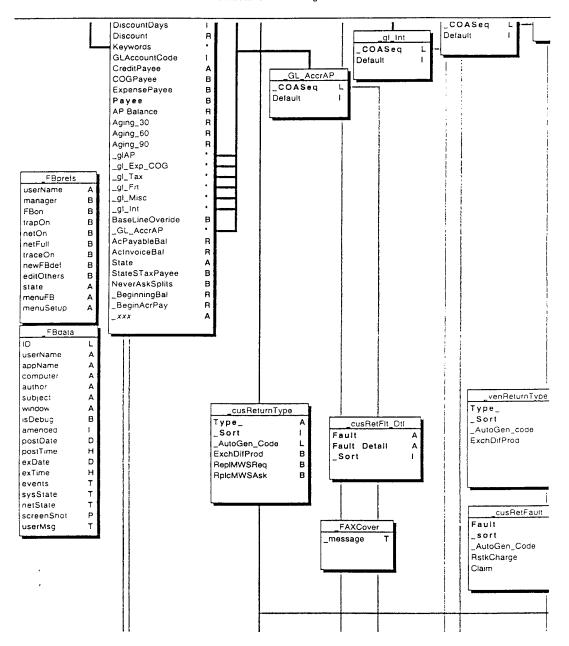
Structure for Mega3.5.4



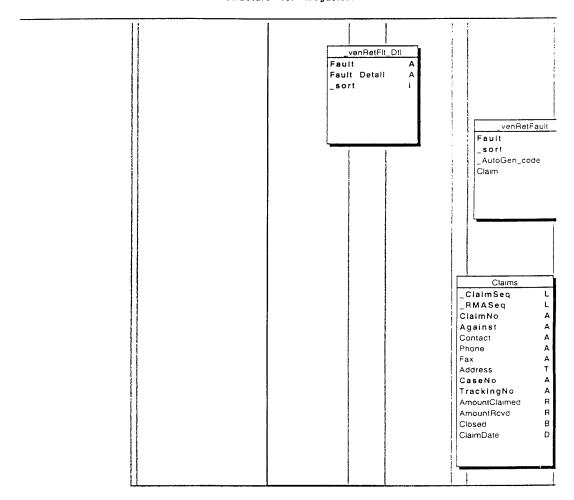
Structure for Mega3.5.4



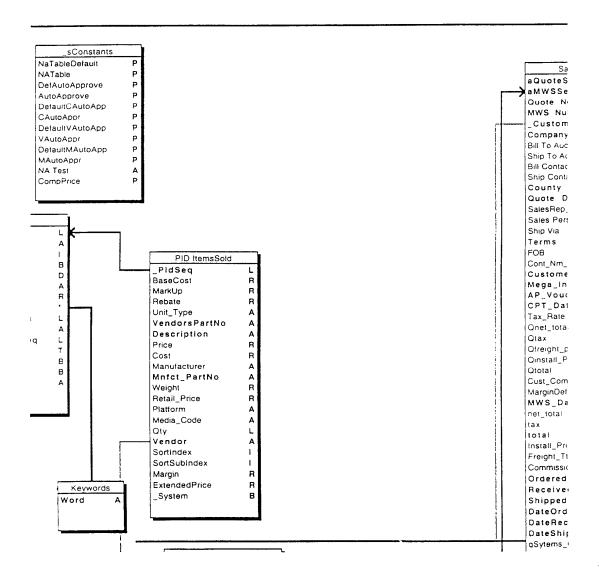
Structure for Mega3.5.4



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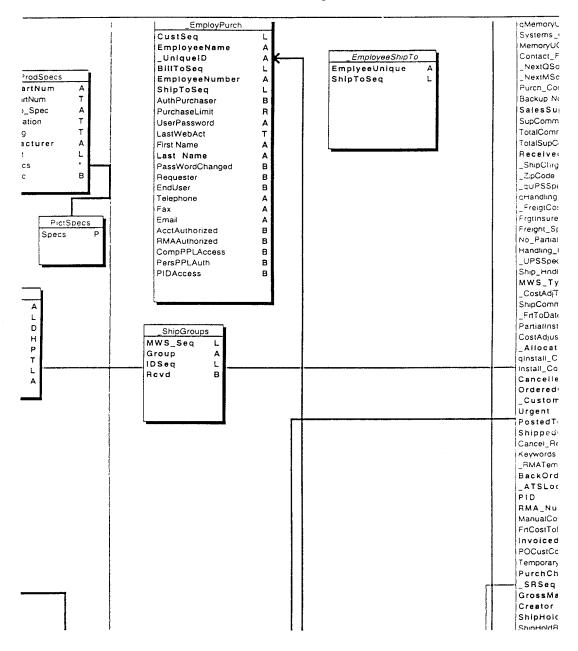


Structure for Mega3.5.4

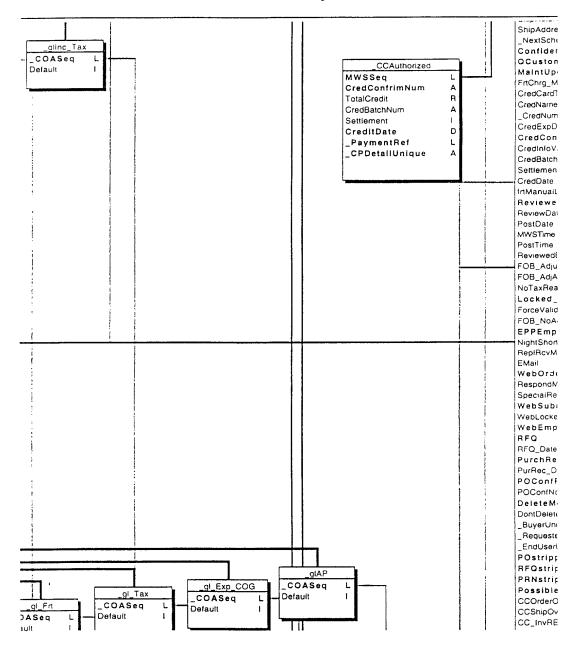


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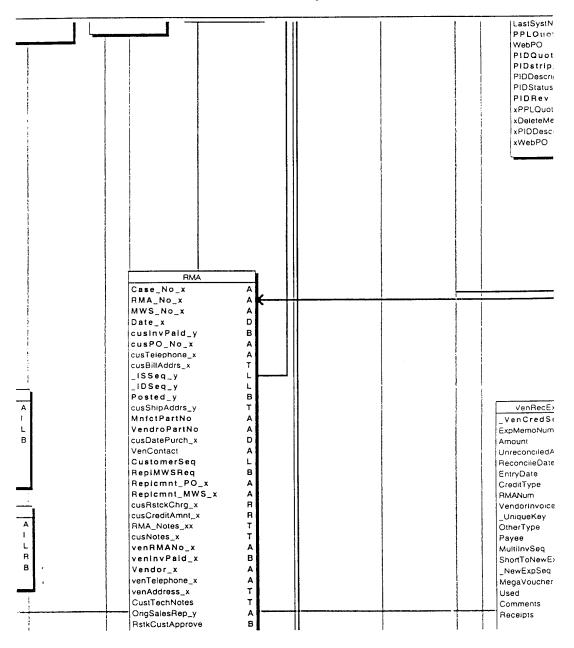
Structure for Mega3.5.4



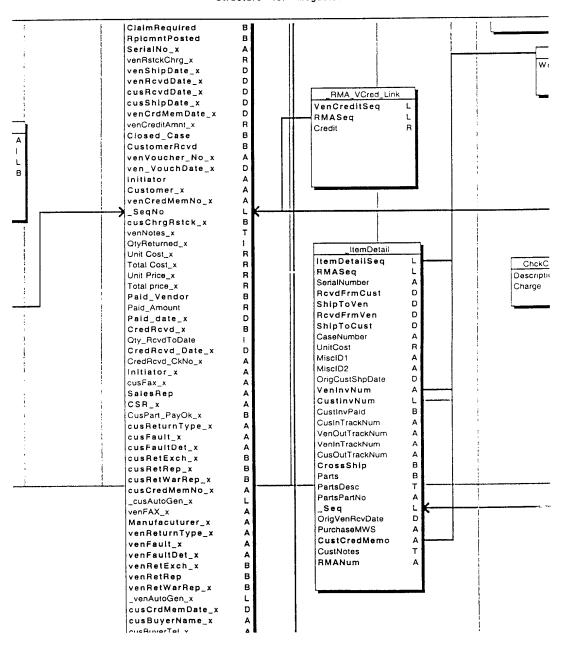
Structure for Mega3.5.4



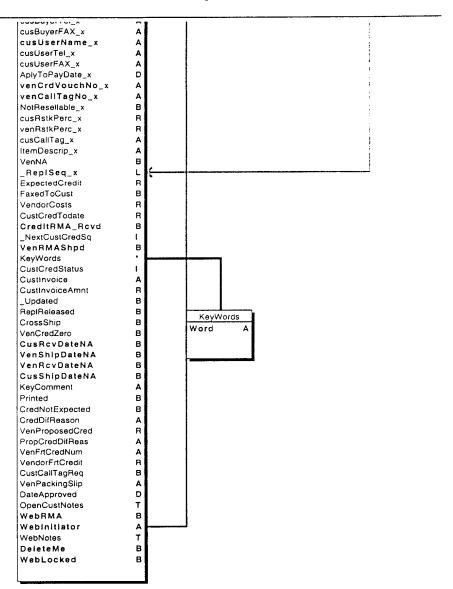
Structure for Mega3.5.4



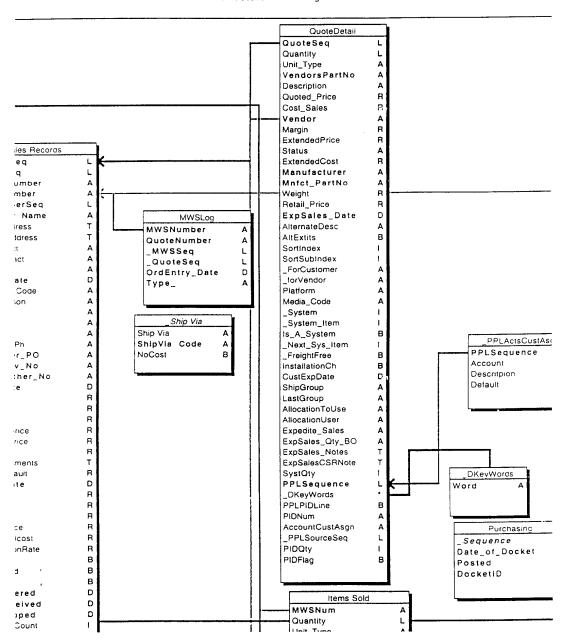
Structure for Mega3.5.4



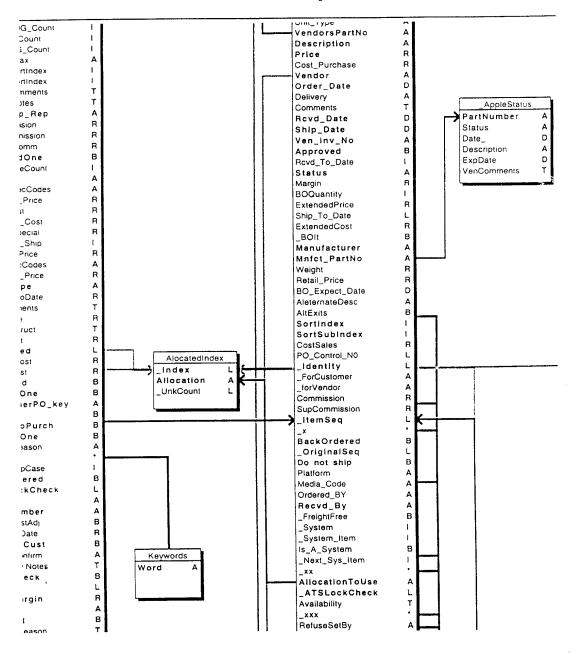
Structure for Mega3.5.4



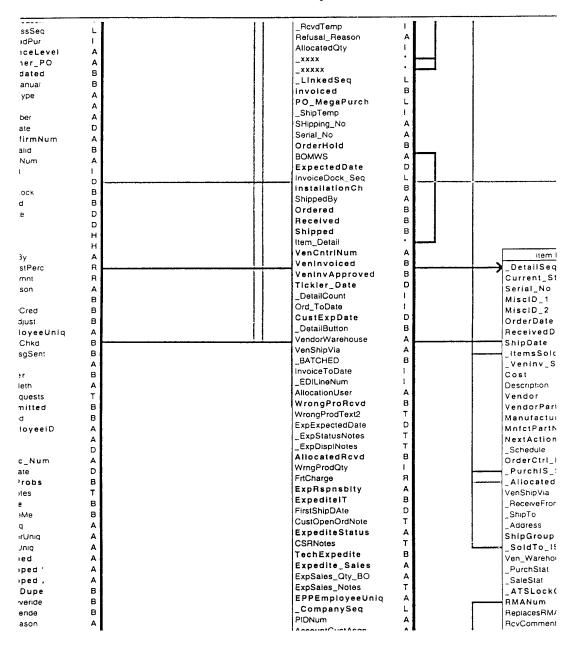
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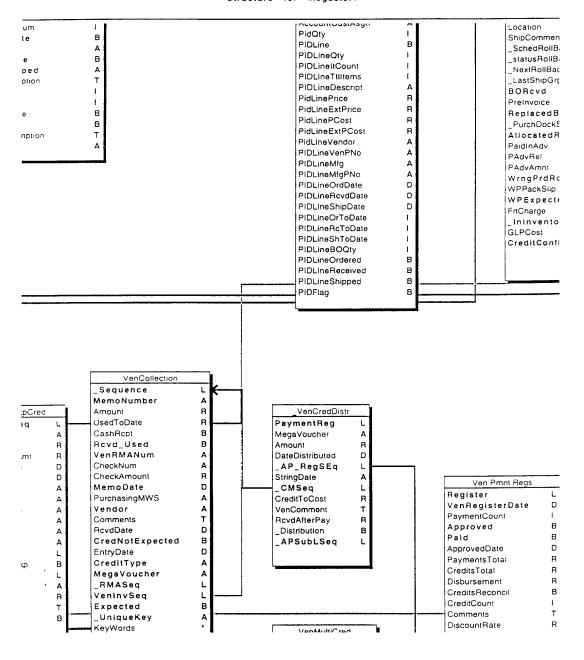
Structure for Mega3.5.4



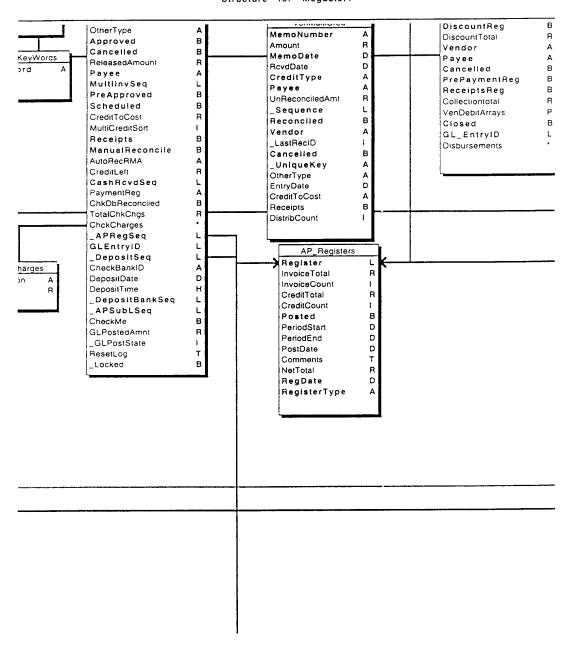
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Structure for Mega3.5.4

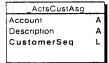


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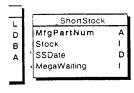


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Structure for Mega3.5.4

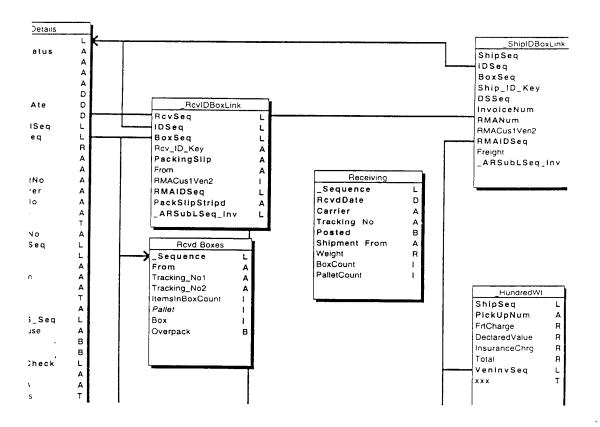


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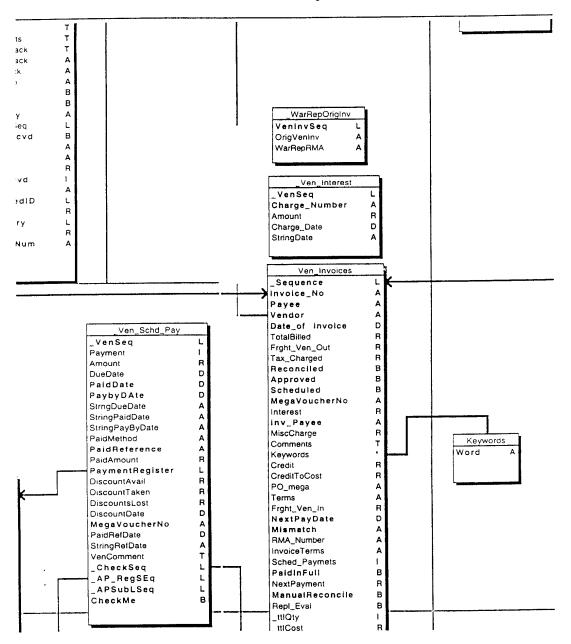


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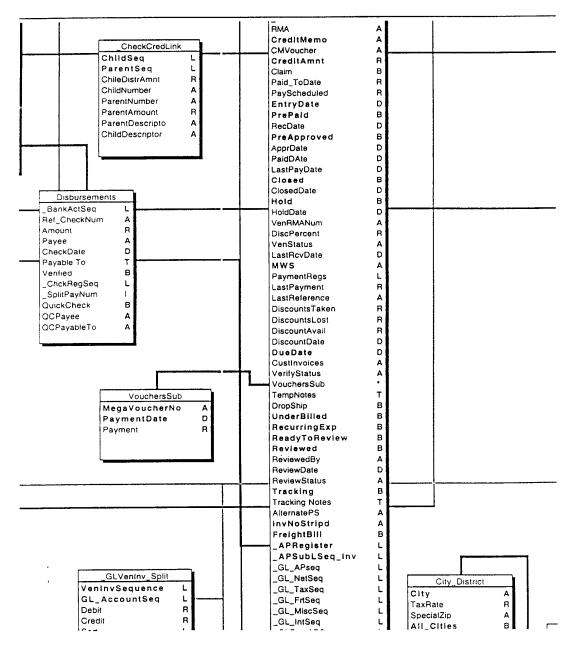
Structure for Mega3.5.4



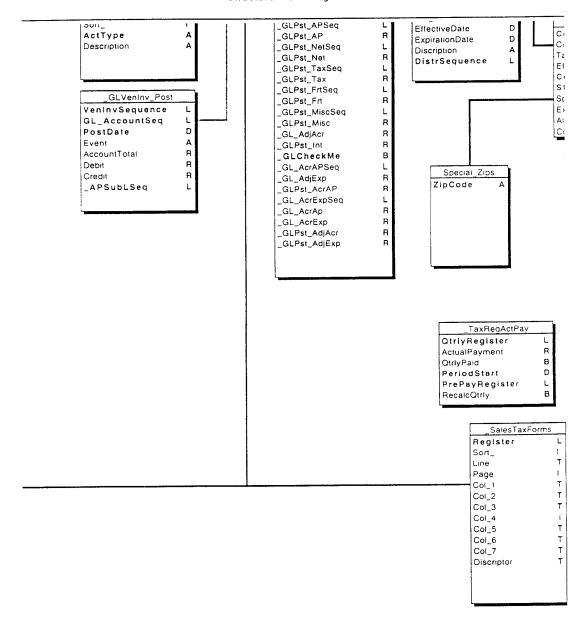
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Structure for Mega3.5.4

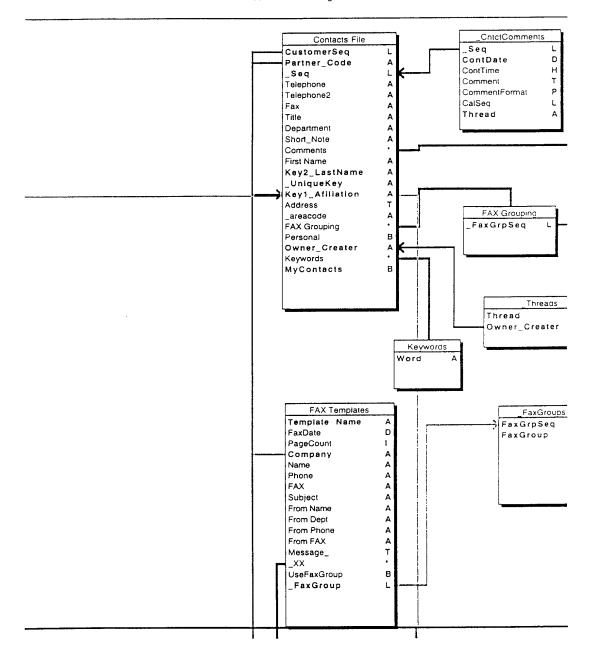


Structure for Mega3.5.4



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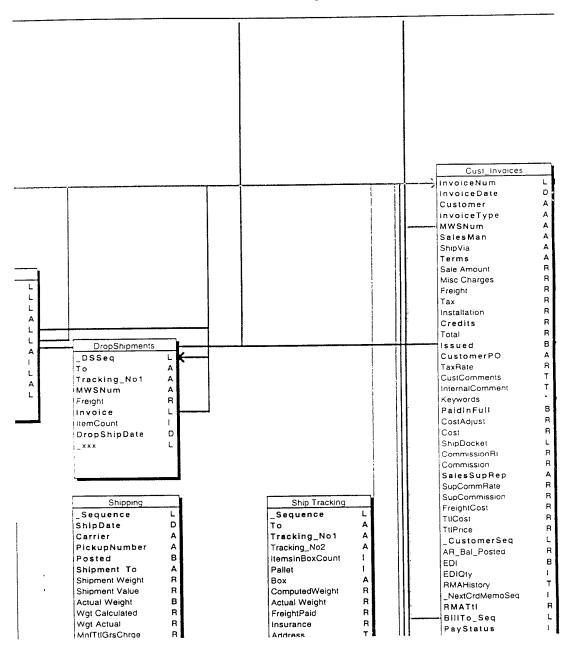
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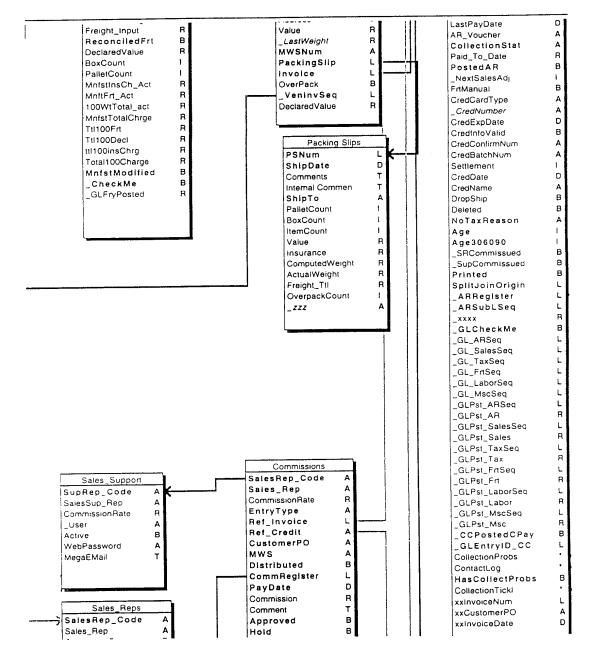
Structure for Mega3.5.4

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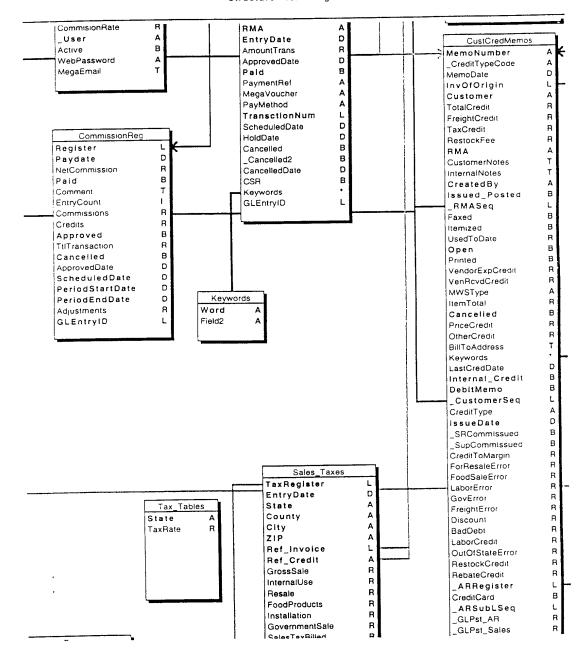
Structure for Mega3.5.4



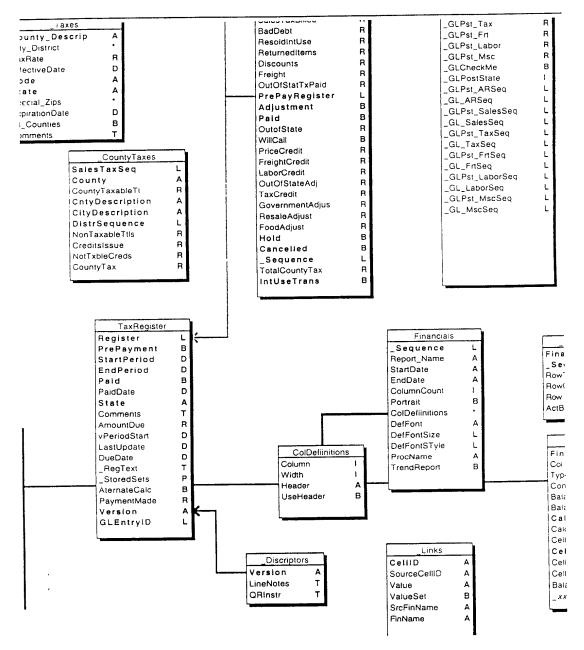
Structure for Mega3.5.4



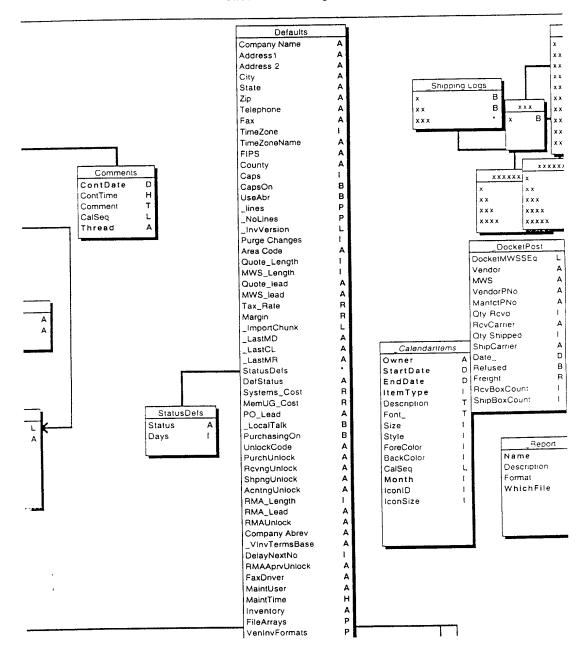
Structure for Mega3.5.4



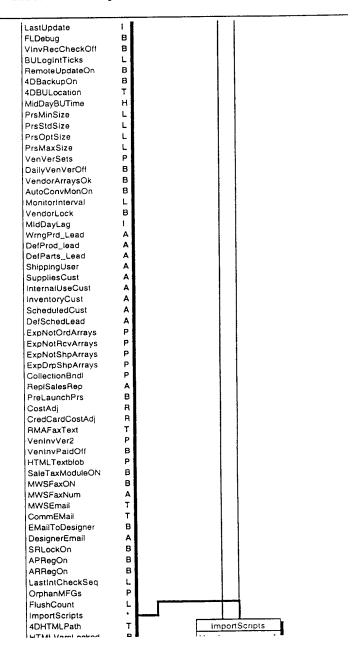
Structure for Mega3.5.4



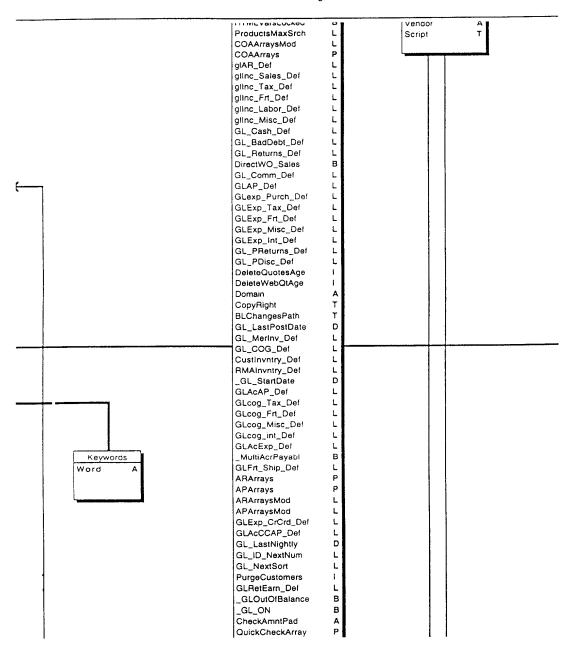
Structure for Mega3.5.4



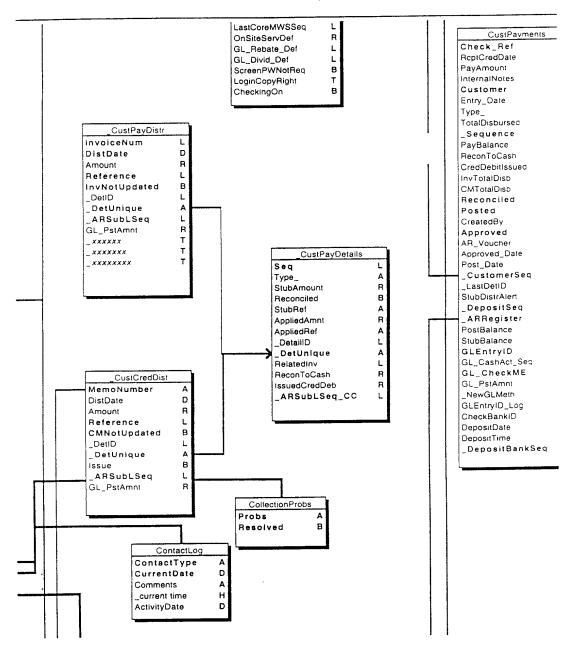
Structure for Mega3.5.4



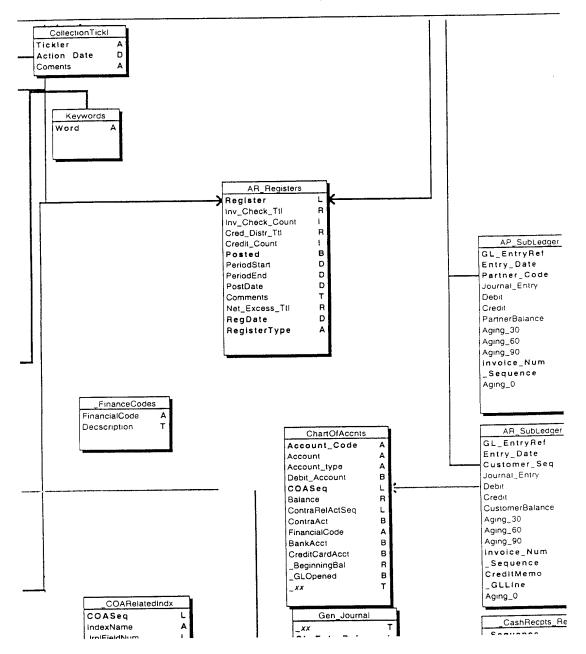
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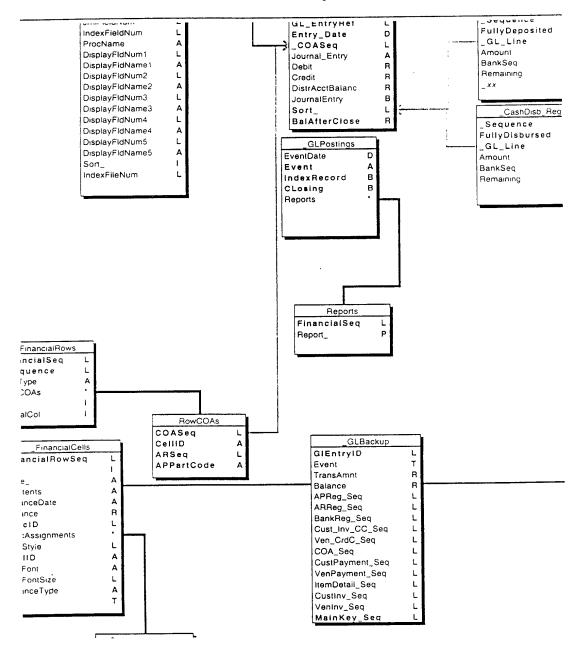
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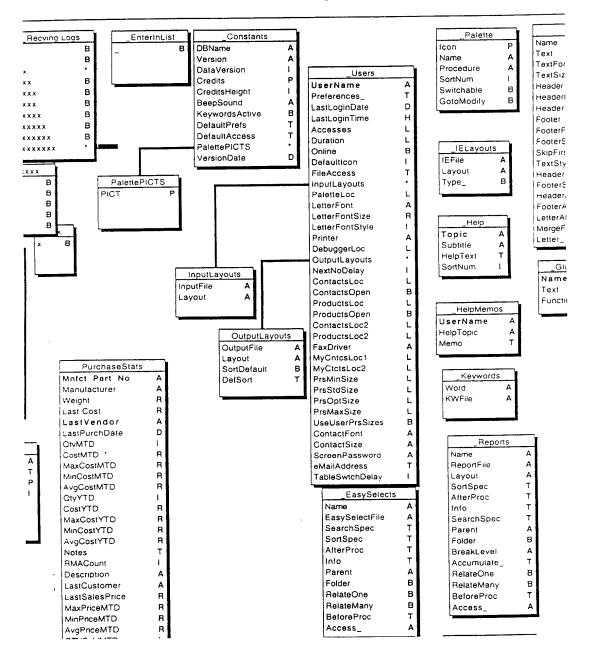
Structure for Mega3.5.4



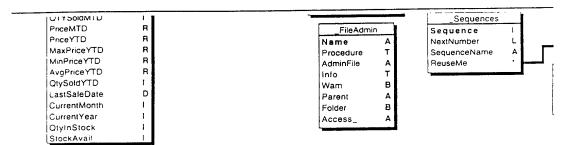
Structure for Mega3.5.4

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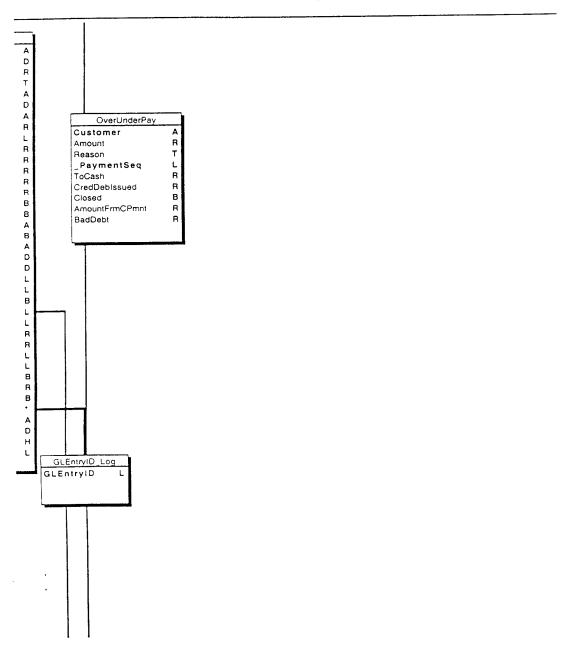
Structure for Mega3.5.4



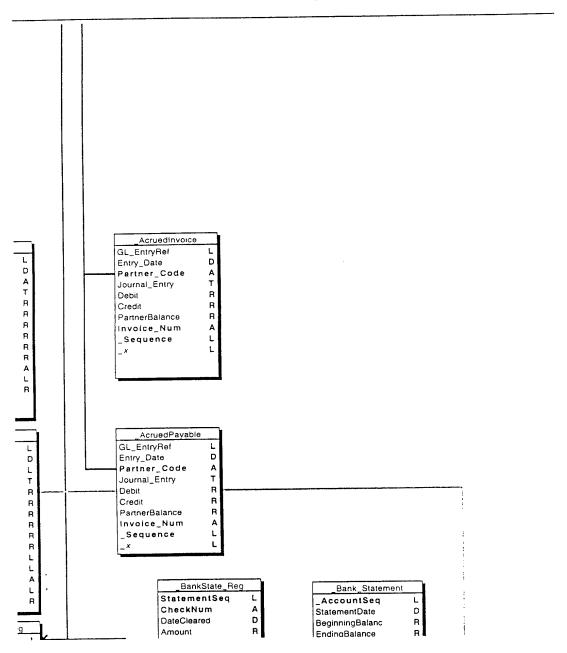
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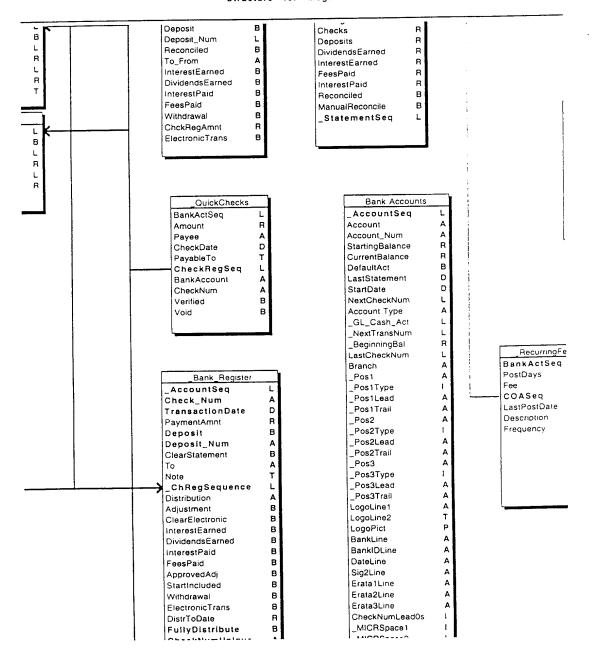
Structure for Mega3.5.4



Structure for Mega3.5.4



Structure for Mega3.5.4



Structure for Mega3.5.4

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De	pVerifyDate	D	_Pos4	Α
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			_Pos5Lead	Α
			Pos5Trail	Α
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			MICRSpace5	1
			NextDepNum	Ĺ
			DepNumLead0s	- 1

Structure for Mega3.5.4

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Structure for Mega3.5.4

ReuseMe NextNumber L

Structure for Mega3.5.4

GLBankRg_Split	
BankRegSequence	L
GL_AccountSeq	L
Debit	R
Credit	R
Sort_	1
ActType	Α
GL_Account	Α
Editable	В
CashRcptSeq	L
Explanation	Α
CashDisbSeq	L

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L A R L D A A What is claimed is:

A method of business-to-business transaction processing using a database and a database management system, comprising:

receiving user demand information electronically,

at least partially in response to ...ceiving the user demand information electronically, automatically storing an order record in the database and maintaining the order record in the database throughout a life cycle of the order; and

during the life cycle of the order, multiple users each accessing the order record and processing the order to accomplish a respective one of multiple business functions, and creating records related to the order.

- 2. The method of Claim 1, wherein the life cycle of the order includes an expected period for at least one of reversal, service, and parts order
- 3. The method of Claim 2, wherein reversal includes customer returns and correction of improperly fulfilled or mistaken orders.
  - 4. The method of Claim 1, or Claim 2 or Claim 3, further comprising providing within the database management system at least one of a table switch function and a related table switch function, wherein

the table switch function enables a user to freely view records of any of various tables except as otherwise prohibited by access authority defined by a supervisory user;

the related table switch function enables a user to freely view records of any of various tables related to a selected record, except as otherwise prohibited by access authority defined by a supervisory user.

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5. The method of Claim 4, wherein the related switch function is used to display information to a user via the Web.

- 6. The method of any of the preceding claims, further comprising defining automated workflow processes for a plurality of business function—using the database and the database management system, wherein the workflow processes constrain user inputs and actions but allow use of at least one of the table switch function and the related table switch function.
- 7. The method of Claim 6, further comprising allowing a user with proper authority to access all tables containing transaction-relevant information
- 8. The method of any of the preceding claims, further comprising providing a central table supporting multiple business functions, whereby changes made by one user performing one business function can be viewed immediately thereafter by other users performing other business functions
- 9. The method of Claim 8, wherein the central table is an item detail table.
  - 10. The method of Claim 8, further comprising:
    users, in response to business events, entering information affecting
    financials into the database; and

posting general ledger entries in the database such that latency between entry of said information and posting of a corresponding general ledger entry is either negligible or not greater than a predetermined small time period.

- The method of Claim 10, wherein the predetermined small time period is one day, allowing for the preparation of substantially real-time financial reports.
- The method of any of the preceding claims, further comprising processing information stored within the database to provide functionality within a majority of the following categories: enterprise resource planning, sales force automation, supply chain management, purchasing automation and electronic commerce.
  - 13. The method of any of the preceding claims, further comprising.

    in response to receiving the user demand information electronically, automatically storing a quote record in the database;

    receiving further user demand information electronically.

    in response to receiving the further user demand information electronically, automatically converting a quote record to an order record
- The method of any of the preceding claims, wherein the database management system is Web-enabled, and at least one of said user demand information and said further user demand information is received via the Web
- 15. The method of any of the preceding claims, further comprising a user retrieving a quote record that has not yet been converted into an order record. modifying the quote record, and updating the quote record
- 16. The method of any of the preceding claims, further comprising a user retrieving an order or quote record, duplicating the order record as a quote record, modifying the quote record, and saving the quote record as a new quote record.

- 17. The method of any of the preceding claims further comprising allowing a supervisor to view quotes created by subordinates of that supervisor:
- The method of any of the preceding claims, further comprising, for each of a plurality of users, storing within the database management system a plurality of favorite quotes of that user for ready duplication.
- 19. The method of Claim 18, further comprising allowing a user to change that user's favorite quotes and effecting the changes on-the-fly in real time.
- 20. The method of any of the preceding claims, further comprising eliciting user demand information by displaying to a user products approved for purchase by that user.
- 21. The method of any of the preceding claims, further comprising eliciting user demand information by displaying to a user a summary of products frequently purchased or recently purchased by that user
- 22. The method of any of the preceding claims wherein the user demand information includes at least one of installation instructions and shipping instructions.
- 23. The method of Claim 22, further comprising automatically enforcing dependencies based on at least one of ship group and installation group
  - The method of any of the preceding claims, further comprising automatically identifying quote records less likely to be converted into order records; and

communicating with users so as to increase the liklihood of the quote records being converted into order records.

- 25. The method of Claim 24, wherein communicating with users comprises automatically communicating with users via the Web.
- 26. The method of Claim 25, further comprising automatically communicating a promotional offer.
- 27. The method of any of the preceding claims, further comprising processing via the Web a post-sale transaction relating to a product previously sold, comprising the steps of:

a user communicating a request via the Web, causing a related record related to an existing order record to be stored; and processing the request using an automated workflow process.

- 28. The method of Claim 27, wherein the post-sale transaction is one of the following: return, service, and parts order.
- The method of any of the preceding claims, wherein the existence of an open return request is automatically taken into account within a plurality of workflow processes.
- 30. The method of any of the preceding claims, further comprising automatically approving a return request in accordance with stored criteria and communicating approval to a user electronically.
- 31. The method of Claim 30, wherein the stored criteria are modified by a user having authority to do so.
- 32. The method of any of the previous claims, further comprising electronically communicating status information to a user.

- The method of Claim 32, wherein the status information pertains to an order.
- 34. The method of Claim 32, wherein the status information is communicated upon receiving an electronic request at the time of request.
- 35. The method of Claim 32, wherein the status information is communicated upon the occurrence of a status change based upon a previous request.
- 36. The method of Claim 32, wherein the status information pertains to a post-sale transaction request.
- 37. The method of Claim 32 wherein the status information is detailed status information concerning payment or non-payment.
  - The method of any of the preceding claims, further comprising:

    automatically classifying records of a given type into multiple classifications for workflow processing;

one or more users interacting with the relational database system to take a prescribed action with respect to multiple records having a particular classification.

- The method of Claim 38, wherein the records of a given type are classified into multiple classifications based on experiential criteria.
- 40. The method of Claim 38, wherein a record may belong to a plurality of categories, the method further comprising sorting records in accordance with a hierarchy of categories such that a record belong to both a category higher in the hierarchy and a category lower in the hierarchy is sorted into a group of records belonging to the higher category.

- The method of Claim 40, further comprising a user rearranging classifications within a hierarchy to effect a business purpose.
- 42. The method of Claim 38, further comprising the relational database system not allowing the one or more users to take at least some actions other than the prescribed action with respect to the records.
- The method of Claim 42, further comprising a user with requisite authority to take an action not allowed for other users not having the requisite authority.
  - 44. The method of Claim 38, further comprising:

    a user interacting with the relational database system to change information within a record; and automatically reclassifying the record.
- 45. The method of any one of Claims 26-35 wherein the records of a given type are of one of the following types: customer invoices, vendor invoices, item sold and return merchandise authorization requests
  - 46. The method of Claim 45, further comprising.

    classifying item sold records;

    forming a group of particular item sold records; and

    creating a vendor order including a vendor order item corresponding to the group of particular item sold records and representing one or

    more units.
- The method of Claim 46, wherein forming a group comprises grouping and regrouping item sold records as many times as desired

- The method of Claim 46, wherein each vendor order item is related to at least one item sold record created in response to receiving directly from a user user demand information.
- The method of Claim 48, wherein an item sold record represents one or more units, and an item detail record related to the item sold record is created for each unit.
  - 50. The method of Claim 49, further comprising:

    receiving one or more units of a vendor order item; and

    for each unit, changing an item detail record to indicate receipt of
    that unit.
- 51. The method of Claim 50, further comprising physically manipulating a unit in accordance with a workflow process defined within the database and changing an item detail record of the unit to reflect the physical manipulation.
- 52. The method of Claim 51, wherein physically manipulating the unit comprises installing the unit within a larger assembly
- 53. The method of any of Claims 26-43 wherein classifying comprises identifying critical path items for fulfilling an order.
- 54. The method of any of Claims 26-44 wherein classifying is performed on the basis of at least a plurality of the following: item, availability, installation instructions, and shipping instructions.
- 55. The method of any of Claims 26-45 further comprising breaking down items into multiple tiers, each successive tier including component parts for items of a previous tier, and creating a record for each component part.

- 56. The method of Claim 55, wherein classifying is performed on the basis of availability within multiple tiers.
- 57. The method of Claim 56, wherein availability information within multiple tiers is obtained via the Web.
- 58. The method of Claim 56, further comprising communicating availability information to a customer and, if the customer desires, changing at least one of installation instructions and shipping instructions.
- 59. The method of Claim 55, further comprising ordering component parts from a vendor, receiving the component parts, and assemblying the component parts into an item.
- 60. The method of Claim 55, further comprising identifying suppliers for the component parts of at least one tier.
- 61. The method of Claim 60, further comprising ordering an item from a vendor and automatically communicating demand information to at least one other supplier of a component part of the item via the Web
- The method of Claim 61, wherein communicating via the Web is accomplished by one of Web push methods and Web pull methods.
- 63. The method of any of the preceding claims further comprising using the data in the database to perform systematic quantitative evaluation of at least one of employee performance, vendor performance and customer performance.

- 64. The method of Claim 63, further comprising at least one of an employee, a vendor and a customer remotely accessing the database and viewing its own quantitative performance data.
- The method of Claim 63, wherein said evaluation is based entirely upon data in the database.
- 66. The method of Claim 63, wherein said evaluation takes into account reversals of orders.

- 67. The method of any of the preceding claims, wherein the user demand information includes, at least implicitly, vendor identification information, further comprising automatically transmitting corresponding order information to a designated vendor for fulfillment of the order.
- 68. The method of Claim 67, further comprising automatically transmitting N-tier order information to multiple corresponding vendors.
  - 69. The method of Claim 1, further comprising:

    displaying to a Web user multiple electronic commerce course-ofdealing options including at least one option relating to products and at

least one option relating to payments;

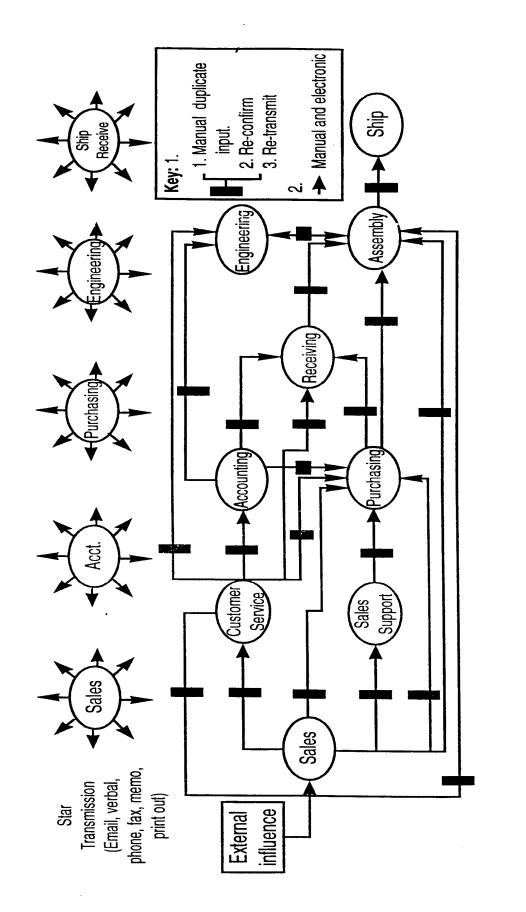
the Web user setting at least one electronic commerce course-of-dealing option in accordance with a choice of the user; and

the electronic commerce system effectuating the choice of the Web user for each of multiple subsequent electronic commerce transactions.

- 70. The method of Claim 69, further comprising effectuating the choice of the Web user on-the-fly in real time.
- 71. The method of Claim 69, wherein displaying comprises displaying a multiplicity of electronic commerce course-of-dealing options in tabular form.
- 72. The method of Claim 69, wherein course-of-dealing information is read during transaction processing of an electronic commerce transaction.
  - 73. The method of Claim 69, further comprising:
    setting authorities of multiple Web users; and
    allowing a Web user to set an electronic commerce course-of-dealing option only if the Web user is authorized to do so.

- 74. The method of Claim 73, further comprising effectuating the settings on-the-fly in real time.
- 75. The method of any of claims 61-64, wherein a second, working-level electronic commerce course-of-dealing option relates to the authority of a Web user to perform a predetermined action authorized in accordance with a first, enterprise-level electronic commerce course-of-dealing option.

- 76. The method of any of the foregoing claims, further comprising making remotely accessible to a user status information pertaining to each of a majority of the following product life cycle stages: purchasing, receiving, shipping, installation/assembly, billing, and returns/service.
- 77. The method of any of the foregoing claims, further comprising a user executing a dynamic workflow process not explicitly provided for.
- 78. The method of any of the foregoing claims, further comprising an external user remotely setting or changing authority of one or more users.
- 79. The method of Claim 78, further comprising the system immediately effecting the changes in authority.



**FIG.1** 

Fig. 2

Fig. 2A	Fig. 2B	Fig. 2C

## Factual Analysis

Employee/Vendor performance

Customer satisfaction

External influence and view (Vendor, customer, employee, new customer account)

- Electronic means (Web business to business commerce, satelite, EDI to mainframe, infranet internal corporate business process), remote terminal direct dial.
- 2. Telecommunication means E-mail, phone, fax.
- 3. Physical means letter, physical visit.

External influence

FIG. 2A

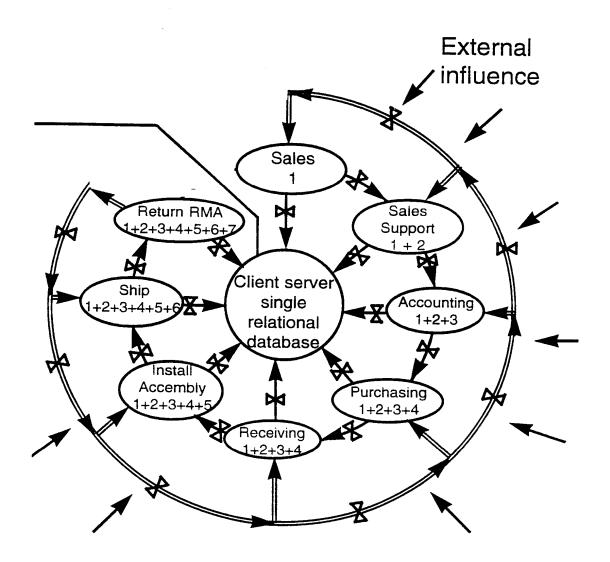


FIG. 2B

- X 1. Secured and authority check.
  - 2. Best practice, possible outcome, expected input parameters affecting downstream.
  - 3. Process is reversible until posted.
  - 4. Track discrepancy and allow improvement from feedback.
  - 5. Trigger one event to allow other event happens.

## External influence

Key

Electronic, non-manual original process
Electronic, non-manual reversible process

Fig. 2C

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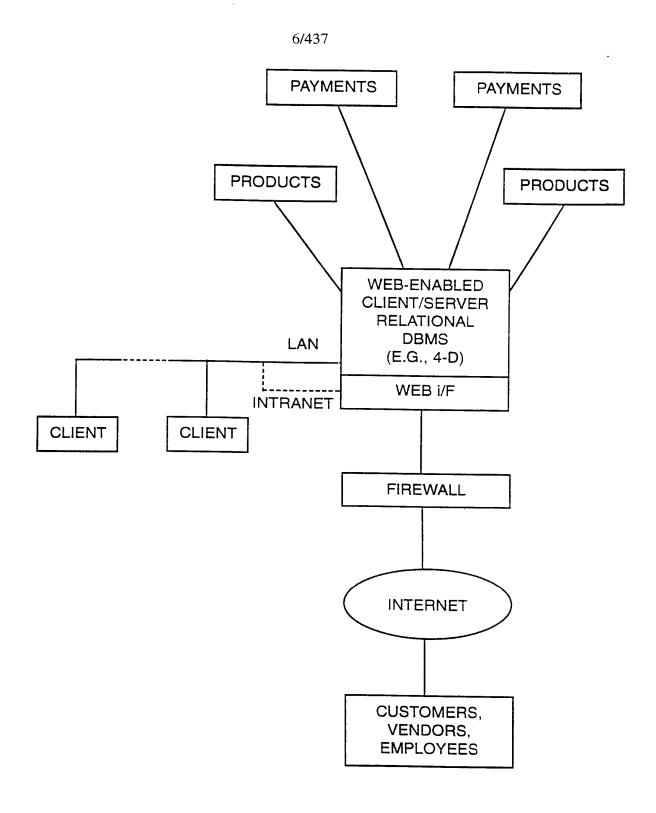


FIG.3

Products Returns/Repair Tracking Reports Accounting Log Off Home	Products - New Quote	Search Options: [1.] Product listing from all Mfr. by product category	2. Product listing from single Mfr. by product category	[3.] Product listing by Mfr. name or description, or Part#	[4.] Product listing from single Mfr. by description, or Part#	5. previous purchase history ( Core products)	6. Search by product ID (Pre-configured Products)	7. Approved products list (Company catalog)-APL	8. Previous quotes history	1. PID Maintenance [2.] APL Maintrenance FIG. 4
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Home Search by Groups and Categories Off Log Accounting Reports Tracking Returns/Repair 1. Products Products

O Accessories & Supplies	O Computers/Termionals	O Education	O Enhancement Products	O Input Devices
O Momory	O Multifunctioanal Devices	O Network & O Power Communication H/W Equipment	O Power Equipment	O Premise Wiring & Rack Systems
O Printed Information	O Printers & Plotters	O Services & Agreement	O Software Application	O Software, Communications
O Software, Systems	O Storage Devices/Enclosures	O Telephony	OVideo Apters & Dispalys	

SUBSTITUTE SHEET (RULE 26)

8/437

Show more details

Search

Reset

FIG. 5

Home Off Categories Log Accounting Reset O CPU Mounitng Kits & Accessories and Other Accessories & Equipment Groups Show more details Reports O Media; Tape cartridges O Media; Removable Disks Supplies O Media; Optical Disks O Cables & Connectors O Media; Floppy Disks O Monitor Accessories O Notebook Accossries O Printer Accessories accessories O Camera Accesories O Desk Accessories OPrinter Supplies byO Switches & Boxes Ocases & Covers O Label Supplies O Paper Supplies Tracking Ocarrying case لاي Search Accessories Oscanner Returns/Repair Search Products Products

Home 10/437 Off and Categories Log Connectors Accounting لاي Supplies/Cables Search by Groups Reset Reports Accessories & Terminal O Security Device Search Tracking لاب Fax Accessories O Wireless O Modem & O Dispaly O Printer Oscanner Obrive Oother Returns/Repair OUPS OUSB 1 Products Products

FIG. 8

FIG. 8 A

FIG. 8 B

Searching for products selected. If this takes too long, narrow down your search please. 234 records found. Preparing data for display.

Home Off Log Accounting Reports Tracking | Returns/Repair Products |

Product List

Displaying from record 1of 234, skipping duplicate items. Please check the item(s) you wish to select

Your search criteria for this list was: Printer

Check	Manufacturer	Description	Media	Platform	Media Platform Part Number Price	Price
	TEKTRONIX - PRINTERS	30FT HYPER CABLE (PAR CABLE) IISD/SDX			012-1428-01	66.00
	TEKTRONIX - PRINTERS	CABLE ASSEMBLY INTERCONNE DB9XDB25 IISD/SDX			012-1313-00	50.00
	TEKTRONIX - SUPPLIES	PAR TERMINATOR C36M C361 <sup>3</sup>			011-0156-00	39.00
	TEKTRONIX - PRINTERS	CABLE INTERCONNECT DB25 XDB25 IISD/DDX			012-1312-00	50.00
	TEKTRONIX - PRINTERS	CABLE INTERCONNECT 75 FT HYPER CABLE COLORQUICK			012-1430-00	109.00
	TEKTRONIX - PRINTERS	CABLE INTERCONNECT 50 FOOT HYPER CABLE COLORQUI			012-1429-00	87.00

FIG. 8 A

20.00	61.00	55.00	61.00			
012-1302-00	012-1301-00	012-1299-00	012-1465-00			Search Again
					Reset	
CABLE INTERCONNECT COLOR QUICK	CABLE INTERCONNECT COLOR QUICK	SCSI CABLE 50PIN TO 25PIN	SCSI CABLE	lge: 10	Show Selected Items	of Items Last set of Items
TEKTRONIX - PRINTERS	TEKTRONIX - PRINTERS	TEKTRONIX - PRINTERS	TEKTRONIX - PRINTERS	Maximum display lines per page: 10		Next set of Items
				Maximum		

To narrow down your search within the current selection, click the button below.

Search in Selection

FIG. 8 B

Home Quantity Off Reset Log Please check Quantity for each product. Zero quantity will cancel that item. Please select an action from the menu below and click Take Action button Manufacturer Part# Unit Price 00.99 Accounting Take Action 012-1428-01 Reports Product Shopping Create Quote with above item(s) Tracking Manufacturer TEKTRONIX -PRINTERS Show last Products List Search for more items Returns/Repair| Current Working Quote: New Quote Empty Basket 30FT HYPER CABLE (PAR CABLE) IISD/SDX Description Products

FIG. 9

15/437 Single manufacturer input for further search Home If you wish to select from manufacturers list, click on the first letter of the manufacturer. Other Off Continue Σ Log 2 Accounting × Ь 3 Reports  $\gt$  $\Xi$ Tracking Ŋ Н ſΞų Ŋ 回 Returns/Repair  $\simeq$ Д Ø Products -Manufacturer: Д Щ Products 0

<u>-1</u>G. 10

					17/4	<b>1</b> 37					l				
Home	Products)										ن				
Products Returns/Repair Tracking Reports Accounting Log Off	5.Products - Search the previously purchased products(Core Pro	Please input one or more of the folowing information.	Manufacturer:	Description:	Manufacturer Part#:	Search multiple products with part numbers	Maximum lines per page: 10	Core Products From: day $\boxed{V}$ month $\boxed{V}$ year $\boxed{V}$ To: day $\boxed{V}$ Within dates:	Search Reset	Show all Core Products	If you wish to select from manufacturers list, click on the first letter of the manufacturer	A B C D E F G H I J K L M	f N = f O = f P = f Q = f R = f S = f T = f U = f V = f W = f X = f Y = f Z =	Other	FIG. 12

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FIG. 13

FIG. 13 A

FIG. 13 B

Home

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Log Off	
orts Accounting	
ing Reports Acco	
air Tracking	
Products Returns/Repair Tracking Reports Accounting Log Off	
Products	

Product List

Displaying from record 1 of 72, skipping duplicate items. Please check the item(s) you wish to select

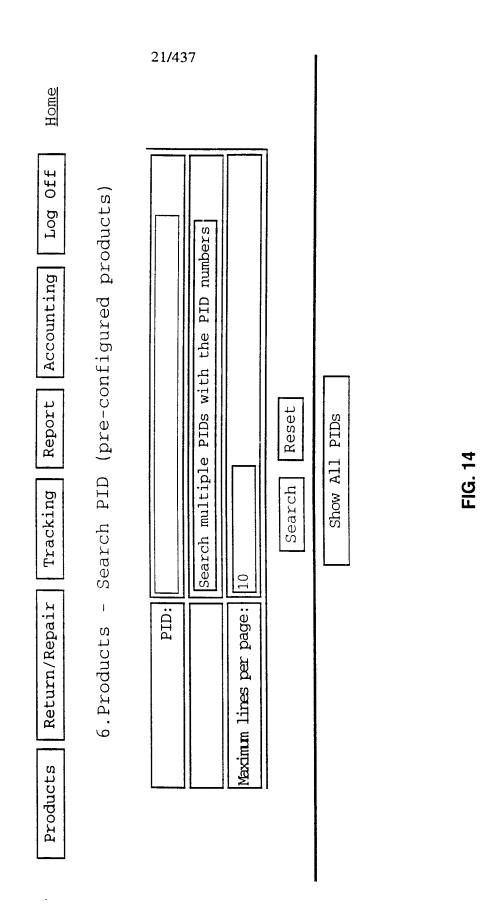
Your search criteria for this list was: compaq

Check	Check Manufacturer	Description	Part Number	Price	Last PO Number	Date Last Purchase Purchased	Purchase Count
	compaq	COMPAQ TOWER TO RACK CONVERSION KIT	149068-001	419.00		9/30/98	5
	compaq	256MB BUFFERED EDO DIMM MEMORY KIT	149026-B21 1,343.00	1,343.00		9/21/98	20
	compaq	COMPAQ PROLJANT 850R 6/200H: MODEL I (HP MODEL)	167200-001 2,532.00	2,532.00		86/6/6	
	compaq	COMPAQ RACK 7122	163747-001	1,616.00		86/9/8	_
	СОМРАО	COMPAQ CPU TO SWITCHBOX CABLES, 20FT	165638-002	70.00		86/1//	13

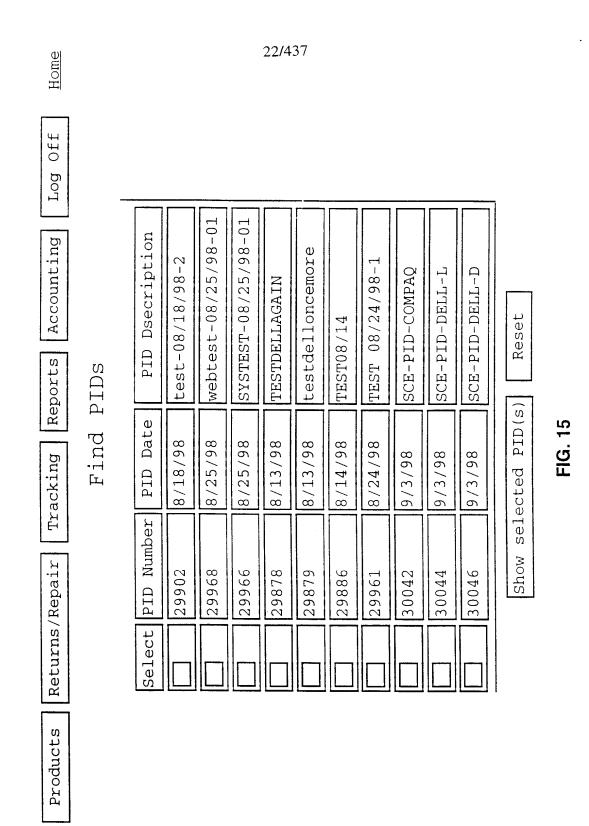
FIG. 13 A

27	27	10		38			
9/18/98	86/81/6	86/1//	86/0٤/9	6/18/98			Search Again
						Reset	Searc
195.00	1,577.00	2,049.00	542.00	68.00			Items
165652-001	165753-001	139142-001	169286-(0)1	165638-001		ted Items	set of
SIDEWALL KIT (LEFT/RIGHT) 7142 42U COMPAQ RACK	RACK 7142 42U (7FT) W/DOOR	SIMM, 32 MB, FOR PROLIANT MODELS UP TO 4500(SPARE PART)	REDUNDANT POWER SUPPLY (6500 R), HOT PLUGGABLE	RM 9 FOOT CPU TO SWITCH CABLE KIT (backorder on purt# 165638-002 20 ft cable)	e: 10	Show Selected	of Items Last
COMPAQ - SERVERS	COMPAQ - SERVERS	COMPAQ	сомрад	СОМРАО	Maximum display lines per page: 10		Next set c
					imum di		

Search in Selection FIG. 13 B



SUBSTITUTE SHEET (RULE 26)



SUBSTITUTE SHEET (RULE 26)

FIG. 16

FIG. 16 A

FIG. 16 B

Accounting Reports Returns/Repair Tracking Products

Log Off

Product List

**Displaying 1 PID(s).** Please check the item(s) you wish to select

Check	Manufacturer	Description	Media	Media Platform	Part Number	Price
	PID	SCE-PID-COMPAQ			30042	29,067.94
	compaq	FIBER CHANNEL ARRAY KIT			223100-001	
	compaq	FIBER CHANNEL HOST CONTROLLER KIT/P			223180-B21	
	compad	FIBER CHANNEL STORAGE HUB 7			234453-001	
	COMPAQ SERVERS	512MB KIT (4X128MB DIMMS) 60NS EDO ECC PROLIANT			241773-B21	
	compaq	PROLIANT 7000 6/200-512: MODEL 1S-128 (128 MB)			273350-005	
	COMPAQ - SERVERS	SMART-2DH PCI 2CH ARRAY CONTROLLER W/16MB CACHE			295242-B21	

Search Again 304100-B21 308006-001 Items Reset of set Items PROLIANT STORAGE SYS /UI RM SINGLE BUS ULTRAWIDE MULTISCAN V55 15IN 13.7VIS 28MM 10X7 COLMON Previous Show Selected Items of Maximum display lines per page: | 10 set First COMPAQ SERVERS COMPAQ

FIG. 16 B

<u>Home</u>	Г)				26	5/437		<b>¬</b>			er.	·		-
Products         Returns/Repair         Tracking         Reports         Accounting         Log Off	6.Products - Search the customer approved products list(APL)	Please input one or more of the folowing information.	Manufacturer:	Description:	Manufacturer Part#:	Search multiple products with part numbers	Maximum lines per page: 10	Please select an action below and click Take Action button.	Search Company APL Search Personal APL Show all Company API	Show all Personal APL	If you wish to select from manufacturers list, click on the first letter of the manufacturer.	A         B         C         D         E         F         G         H         I         J         K         L         M           N         O         P         Q         R         S         T         U         V         W         X         Y         Z	Other	FIG. 17

27/437 Home Log Off this Quote Accounting Find Quotes Look Up this week's quotes quotes Reports More Quotes Ø Show today' Tracking 1 Products Show Returns/Repair Products

SUBSTITUTE SHEET (RULE 26)

28/437 Home Off Log Customer PO Number E1028903-000000001-Accounting Reset Quotes Reports Quote Date Quote 11/19/98 Find Tracking selected Quote Number 098-30413 Show Returns/Repair Select Products

FIG. 20

FIG. 20 A

FIG. 20 B

30/437 Finail Notification **Purchase Assistant** <u>Home</u> 45.00 **Extended Price** FOB Log Off Orig Installed | Unit Price | Qty | Accounting 45.00  $\triangle$ P0: Terms Quote For: SOUTHERN CALIFORNIA EDISON Reports N30 Z Quote Number: Q98-30413 Mcga Network Quote Quote Number: Q98-3 785 Palomar Avenue, Sunnyvale, CA 94086 Quote Date: 11/19/98 Phone: (408) 730-9138 Fax:(408) 720-1293 Mfct.-Part No. Δ Tracking E1028903-000000001- PRN: 107400 188485-001 Ship Via KIT, SPS-GUIDE, MAINT/SVCS Returns/Repair Description UPS Ground Products Charles Person New notes: Sales Item# Wong

FIG. 20 A

Please select an action and click Take Action button.

Show last Search results of Products List Add/Change/Remove products in this quote Arrange the order of the quote items

Save this quote for future reference I am ready to order Duplicate this quote into a new quote

Take Action

Reset

FIG. 20 B

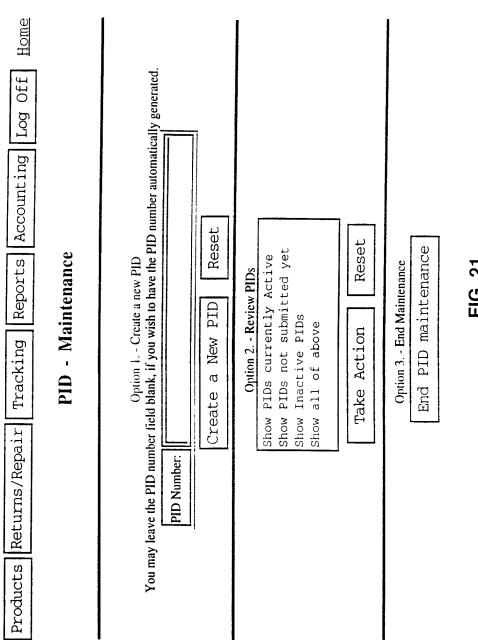


FIG. 2

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FIG. 22

FIG. 22 A

FIG. 22 B

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Home				on	on		/437
Log Off		details.	PID Staus	ACTIVE and in production	ACTIVE and in production	ACTIVE and in production	
Accounting		ı to view	Н	ACTIVE a	ACTIVE ar	ACTIVE a	INACTIVE
Acc		wish	uc		0.1	0.1	
Reports	PID list	er if you	PID Description	18/98-2	webtest-08/25/98-01	SYSTEST-08/25/98-01	
Tracking	PID	ck on the PID number if you wish to view details	PID I	test-08/18/98-2	webtest-	SYSTEST-	test1
Repair 1		k on the	Date	8/18/98	8/25/98	8/25/98	8/12/98
Returns/R		Please clic	Revision	0	0	0	0
Products		Д	OID number	29902	29968	29966	29851

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29961	0	8/24/98	8/24/98   TEST 08/24/98-1	ACTIVE and in production
30042	0	86/8/6	SCE-PID-COMPAQ	ACTIVE and in production
30044	0	9/3/98	SCE-PID-DELL-L	ACTIVE and in production
30046	0	86/8/6	SCE-PID-DELL-D	ACTIVE and in production

36/437 <u>Home</u> Log Off Cancel Accounting APL Maintenance APL Maintenance Report Personal Tracking Company APL Maintenance Return/Repair Products

Accounting Log Off Home	Maintenance	nd click Add or Delete button	item Reset	nd click Take Action Button	Take Action Reset	
Products Returns/Repair Tracking Reports	Company APL - Maint	Option 1Please input one Part number below and click Add or Delete button Manufacturer Part Number:	Delete above item Add above ite	Option 2 please select one option below and click Take Action Button	Search for products to add to APL Delete items in list End APL maintenance Show all -Sort by Part Number Show all -Sort by Manufacturer Show all -Sort by Price Show all -Sort by Description	FIG. 24

		38/437	-
cking Reports Accounting Log Off Home Product Information	ields. Asset Tag Number:	Option 2. If you don't have above information, please input one of the following fields.  Smer purchase Order #:  Customer PRN #:  Customer RFQ #:  Customer RFQ #:  Search  Reset	the above information available, please click below.  More Search Options  FIG. 25
Products Returns/Repair Tracking Return Prod	Option 1Please input one of the follwing fields.  Serial Number:  Search Re	Option 2. If you don't have above informatustomer purchase Order #:  Customer PRN #:  Search	Option 3. If you do not have the above inf

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FIG. 26

FIG. 26 A

FIG. 26 B

	1				40/437			. !
Products       Returns/Repair       Tracking       Reports       Accounting       Log Off       Home         Return Product Search	Option 1. Please input one or more of the following information	Manufacturer's Name:	Manufacturer's Part#:	select month $\overline{V}$ select month $\overline{V}$	and: select month $ V $ select month $ V $ select month $ V $ Sort records by: $ V $ manufacturer $ V $ Date $ V $	Search	( To list manufacturers, click on the first letter of the manufacturer.)	A B C D E F G H I J K L M N N OTHER

FIG. 26A

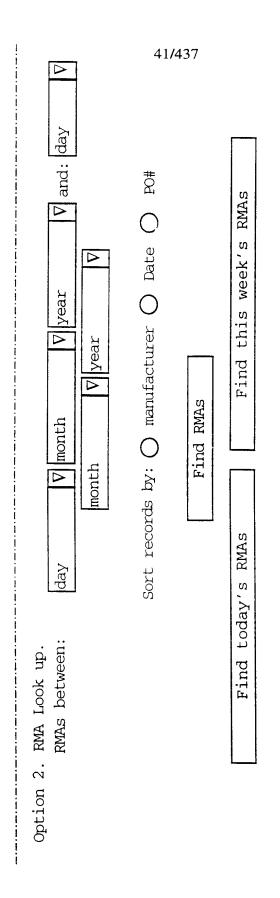


FIG. 26B

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FIG. 27

FIG. 27 A

FIG. 27 B

				43/437		
ত্য		RMA Amount	175.00	315.00	567	359.00
Home		RMA Qty	<b>г</b> -і	21	1	1
Log Off		Part Number	AC12100UDWA	ICS-150	ST34572WC	9005-20
Accounting		Description	2.10GB EIDE UDMA 3.5LP 11MS 5400RPM CAVIAR w/SW, Manuals	LCS-150 STEREO SPK BGE 1.35W AMPL VOL	BARRACUDA 4.55GB ULTRA WSCSI SCA HD 3.5LP 8MS	DISCVIEW PRO UPG VERSION 6 KIT
Reports Ac	Find RMAs	Manufacturer	WESTERN DIGITAL CORP	LABTEC	SEAGATE	MICROTEST
air Tracking	Find	Customer PO Number	E1028903-000000001-0	E1028903-000000001-0	E1028903-00000001-0	E1028903-000000001-0
Returns/Repai		Date	6/22/98	96/2/9	[]	86/6/9
H		RMA Number	R-311112CR	R-311954CR	R-312033CR	R-312284CR
Products		Case Number	Tenp27441-1	Тетр27329-1	Tenp27663-1	Tenp27759-1

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		44/437		
285.00	94.00	215.00	160.00	236.00
-1	<del>[  </del>	1	-	2
AHA-2742AT KIT	STT15220-X1.1	4000RIL	LPCLPC-CX10	88845
32BIT EISA FSCSI2 BMHA MASTER KIT	STEALTH II MODEL S220 4MB PCI SGRAM BD	CAVIAR 4.0GB INT EIDE HD 3.5LP 11.5MS 5200ROM RTL	CLP XARA MOST LIC ML	IDE CD ROM internal drive 12/24x
ASAPTEC- CONTROLLER	DIAMOND MULTIMEDIA	WESTERN DIGITAL CORP	COREL	DELL
E1028903-000000001-0	E1028903-000000001-0	E1028903-000000001-0	E1028903-000000001-0	E1028903-000000001-0
6/15/98	6/22/98	6/29/98	86/08/9	7/1/98
R-311112CR	R-313773CR	R-314033CR	R-314168CR	R-314311CR
Tenp27824-1	Тетр27353-1	Тепр27891-1	Tenp27290-2	Tenp27518-1

FIG. 28

FIG. 28 A

FIG. 28 B

SOUTHERN CALIFORNIA EDISON 2244 WAI NITT GROVE A VE D::#210	Customer: SOUTHERN CALIFORNIA EDISON Customer Fax: (626) 302-7113
Rosemead, CA 91770  Att: ACCOUNTS PAYABLE	Buyer: dee dee Buyer Fax: (408) xxx-
Ship To:	End user: Ed Chavez End user Fax: (626) 302-7565
MEGA NETWORK, INC. 785 Palomar Avenue Sunnyvale, CA 94086	Purchase Order #: E1028903-000000001-0 Purchase Date: 5/11/98
	Return Instructions The helow listed items have been surfacined for
RMA Number: R-311112CR	return to Mega Network for exchange, repair or credit.  If possible return the item in it's original container.  Fold this form along the dotted lines and attach it to the outside of the shipping container so that the Mega
THIS RMA EXPIRES 6/9/98	Network address and RMA number are clearly visible. In this manner this form may be used as a shipping label.
	** Items without the RMA number clearly visible on the shipping container will be refused by the Mega Network Receiving Dept.
	** Merchandise returned for exchange or credit not in their original sealed and undamaged container may be subject to a 15% reconditioning and testing fee.

Serial Number Misc ID 2.10GB EIDE UDMA 3.5LP 11MS 5400RPM CAVIAR w/SW, Manuals

FIG. 28 B

Description

Botting / Donative Manager Dancet Comment	
Froducts necurins/ nepart liacking heports Accounting Log Off Home	
Tracking	
ption 1. Please select type of tracking information that you need:	1
1 O Sales Order Status	
2 O Return Product & Service Part Status	
4 O Return & Service History	
Take Action Reset	
ption 2. Please use the following area to request any special report which is not included above.	1
E-Mail joon@meganetwork.com	
FAX # (408) 720-1293 PHONE # (408) 730-9138 x804	
Take Action Reset	
FIG. 29	

Home If you do not have the above information, please input one or more of the following Log Off select month select month Accounting Customer PRN# Asset Tag# Δ  $\triangle$ Date PO#O Tracking - Sales Order Status select month select month Reset Reset Reports FIG. 30 Please input any one of the following fields: Take Action Returns/Repair | Tracking Sort By: ManufacturerO Take Action Δ Customer RFQ# Serial # select month select month Date purchased between: and: Manufacturer Part# Products | Manufacturer informaion. Option 1. Customer PO# Customer Invoice# Option 2.

SUBSTITUTE SHEET (RULE 26)

FIG. 31

FIG. 31 A
FIG. 31 B
FIG. 31 C
FIG. 31 D

SCS1-3 7200RPM W/UITRA 1.0IN

313706- ы21

SERVERS COMPAQ -

E1028903-000000001-1236

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		not					
Home		Oty Shipped to Date	7	8	_		
Log Off		Ordered Quantity	74	8			
Accounting		Description	REMOTE . INSIGHT/PCI (LAN+MODEM)	SPS-MEM MOD, 128MB, SDRAM	REMOTE INSIGHI/PCI (LAN+ MODEM)	SWART-2DH PCI 2CH ARRAY CONIROLLER W/16MB CACHE	9.1GB PLUGGABLE
Reports A	Tracking records. for display.	Manufacturer Part#	294013-001	317756-001	294013-001	295242-B21	
Tracking		Manufacturer Name	COMPAQ COMPUTER CORP. (SERVERS)	conpag	COMPAQ COMPUTER CORP. (SERVERS)	COMPAQ- SERVERS	
Repair	requested	Date shipped	Oct 14, 1998	Oct 5, 1998	Oct 21, 1998	Oct 15, 1998	
Products   Returns/Repair   Searching database for reque		Customer PO#	E1028903-000000001-1219	E1028903-000000001-1228	E1028903-000000001-1236	E1028903-000000001-1236	
Ъ	Search 25 rec	check					

FIG. 31A

			52/4	37				
- 5	3	<u></u>		7	2	20	4	33
23	3		-1	۲.	5	20	4	33
4.3GB PLUGGABLE W/UJTRA 1.0IN 7200RP, SCSI-3 HD	6/200 512K PROC OPT KIT PROLIANT 6500,7000	PROLIANT 6500 6/200 128MB M1-512K NOHD RM FS 16XCD	KIT, SPS-GUIDE, MAINÆSVC FOR TOWER PROLIANT 4500	RACK TO TOWER CONVERSION KIT FOR PROLIANT 6500	REMOTE INSIGHT/PCI (LAN+ MODEM)	COMPAQ MOUSE OPAL	35/70GB EXT DLT TAPE DRIVE SCSI3 W/CABLE	RACK TO TOWER CONVERSION KIT FOR PROLIANT 6500
272577-001	169470-B21	241700-001	188491-001	169467-001	294013-001	143315-B21	242521-B21	169467 -001
COMPAQ- SERVERS	COMPAQ SERVERS	COMPAQ SERVERS	compaq	сомРад	COMPAQ COMPUTER CORP. (SERVER)	compaq	compaq	СОМРАО
Oct 15, 1998	Oct 15, 1998	Oct 21, 1998	Oct 21, 1998	Oct 21, 1998	Oct 21, 1998	Oct 21, 1998	Oct 21, 1998	Oct 28, 1998
E1028903-000000001-1236	E1028903-00000001-1236	E1028903-00000001-1236	E1028903-000000001-1235	E1028903-000000001-1248	E1028903-00000001-1248	E1028903-00000001-1248	E1028903-000000001-1248	E1028903-00000001-1248

E1028903-	E1028903-000000001-1248	024 01							
E1028903-		OCL 21, 1998	compaq	294343-001	ENHANCED KEYBOARD OPAL	40	40		
	E1028903-000000001-1248	Oct 21, 1998	COMPAQ	308006-001	MULTISCAN V55 15IN 13.7VIS .28MM 10X7 COIMON	44	44		
E1028903-	E1028903-000000001-1248	Oct 21, 1998	compaq	241772-B21	256 MB DIM KIT(4X64MB/60NS BFRD EDO DIMM)F/PROLIANT 6000 SERIES	NS 40	40		
E1028903-	E1028903-000000001-1248	Oct 21, 1998	COMPAQ	241771-B21	128 MEMORY EXPANSION KIT (4X32 DIMMS)	40	40		
E1028903-	E1028903-000000001-1248	Oct 21, 1998	compaq	295643-B21	SMART ARRAY 3200 CONTROLLER	ER 44	44		
check	Customer PO#	Date shipped	Manufacturer Manufacturer Name Part#	Manufacturer Part#	Description Q	Ordered Quantity	Oty Shipped to Date	note	
E1028903-	E1028903-000000001-1248	Oct 21, 1998	COMPAQ SERVERS	313706-B21	9.1GB PLIXCABLE W/ULTRA 1.0IN SCSI-3 7200RPM HD	280	280		

FIG. 310

Home 40 16 Off Log 40 16 PROLLANT 3000 6/333 P2-333 512K 64MB MODEL PROLIANT 6500 6/200 128MB M1-512K NOHD RM FS 16XCD CARTRIDGES (7-PACK) 4.3GB PLUCCABLE W/ULITRA 1.0 IN 7200RPM SCSI-3HD DLT 35/70 Accounting TAPE 272577-001 241700-001 179740-001 295192-B21 Reports Show Checked Item(s) Tracking SERVERS SERVERS COMPAQ-COMPAQ-COMPAQ 21, Oct 21, Oct 21, 21, 1998 1998 1998 1998 Returns/Repair Oct Oct E1028903-000000001-1248 E1028903-00000001-1248 E1028903-000000001-1248 E1028903-000000001-1248 entry Products all clear

FIG. 31D

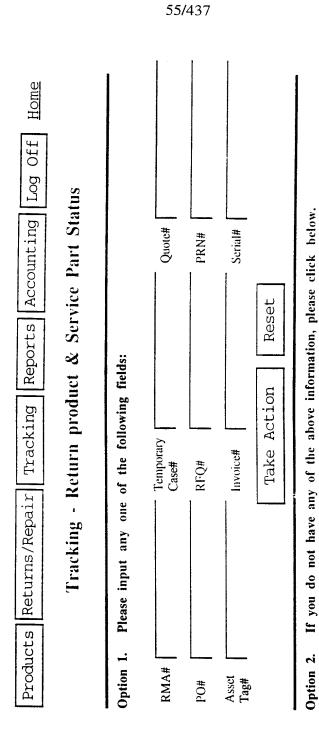


FIG. 32

More Search Options

Reset

					56/437		1
			Status	Ţ	10		
Home			RMA Recvd	ı	10		
			RMA		10	-	
Log Off	Status		Description	VIRTUAL JETPRINIER SIN SOLARIS CD-R	ZIP PLUS 100MB PPT FOR PC OR MPC W/ AUTO DETECT	PROLIANT 6500 6/200 128MB MI-512K NOHD RM FS 16XCD	
Accounting	ice Part		Part#	16A0194	10660	2412700-001	
Reports A	t & Service	ds. isplay.	Manufacturer	LEXMARK INTERNATIONA	IOMEGA	COMPAQ SERVER	Take Action
Tracking	Return product &	quested records. ng data for display.	Invoice#	17495	17424	17317	
Returns/Repair Trac	Tracking - Return	re ari	PO#	E1028903-000000001-0	E1028903-000000001-1	E1028903-00000001-1	Get freight carrier & Tracking # Ship to Address Do a new Search
Reti	Tre	taba	RMA	Sep 21, 1998	Sep 14, 1998	Sep 8	Get freight car Ship to Address Do a new Search
Products		Searching database for 25 records found. Prepa	RMA#	R-319558CR	R-319044CR	R-318698CR	Get Ship Do a
	j	Sear 25	check				

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Products Returns/Repair Tracking Reports Accounting Log Off Home	Tracking - RMA Status	Get Freight Carrier & Tracking #	VIRTUAL JETPRINTER SUN SOLARIS CD-R- PO# E1028903-00000001-0 RMA type for this item is Credit	ZIP PLUS 100MB PPT FOR PC OR MAC W/ AUTODETECT. PO# E1028903-00000001-1 RMA type for this item is Credit	PROLIANT 6500 6/200 128MB M1-512K NOHD RM FS 16XCD- PO# E1028903-00000001-1 RMA type for this item is Credit
Returns/Repair Tr	Tr	Get Fr	VIRTUAL JETPRINTER SUN SOLAR RMA type for this item is Credit	ZIP PLUS 100MB PPT FOR PC OR M RMA type for this item is Credit	PROLIANT 6500 6/200 128MB M1-512 RMA type for this item is Credit
Products			VIRTUAL JE RMA type for	ZIP PLUS 100 RMA type for	PROLIANT 6: RMA type for

FIG. 34

FIG. 35

FIG. 35 A
FIG. 35 B
FIG. 35 C
FIG. 35 D

FIG. 35A

Products	Returns/Repair	Tracking	Returns/Repair Tracking Reports Accounting Log Off
	Tracking	- Product	- Product Purchase History
Searching database	a)	too long, pl	. If this takes too long, please narrow down your search
Search has complet	leted. 18 records found	ound.	

Qty	50	50	50	50	50
Description	MOUSE MSE SER &PS/2	Performance 104 Key Keyboard for Windows 95. Customer Install	DELL INIEGRALTON FEE	DEIL PLUS ROUFIN SKU	DELLPLUS SCE CONSIGNED WINDOWS 95 IMAGE FOR THE LATITUDE CP, FACTORY INSIMILED
Part#	36637-41	310-0039	365-0366	365-0257	360-7371
Manufacturer	DELL	DELL	DEI.I.	DELL	DELL
Invoice	17622	17622	17622	17622	17622
PO#	E1028903-000000001-1221	E1028903-000000001-1221	E1028903-00000001-1221	E1028903-000000001-1221	E1028903-000000001-1221
Date shipped	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998
Date ORDERED	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998

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50	50	50	50	50
DP CONSIGNED LABLL SCE	DEIL PLUS INFO SKU MANUAL SFIWARE INSTALLATION	DEIL PLUS INFO, PRINT LABEL LARGE	Ne:: Business Day, Parts Delivery Service, Years 2 & 3 Included	Selectrare, Initial Year, Next Brainess Day On-Site Service Contract, REC*
360-5087	360-4801	360-3527	900-5112	900-1950
DELL	DELL	DELL	DELL	DELL
17622	17622	17622	17622	17622
E1028903-000000001-1221	E1028903-000000001-1221	E1028903-000000001-1221	E1028903-000000001-1221	E1028903-000000001-1221
Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998
Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998

FIG. 35B

				61/43′	7			
Qty	50	20	20	50	50	50	20	8
Description	WIN95, W/CD all Latitude OP Factory Irecull	6.4 GB HD, 12.5MM LATITUDE CP FACTORY INSTALL,	20X CD ROM, INTERNAL/EXTERNAL, LATITUDE CP FACTORY INSTALL,	64MB, 1DIMM, EDO LATITUDE CP FACTORY INSTALLED	Adared Ret Relicator With Minitor Sard, lat, Op. Redoxy Installed	No Modem For All Dell Notebook	LATITUDE CP M233ST, 12.1" SVCA, TFT, FACTORY INSTALLED	SPS-MEM MOD, 128MB, SDRAM
Part#	420-0541	340-2166	313-0236	311-0342	310-4552	310-3043	220-0386	317756-001
Manufacturer	DELL	DELL	DEL1,	DEI I.,	DELL	DELL	DELL	coubag
Invoice Number	17622	17622	17622	17622	17622	17622	17622	17630
PO#	E1028903-00000001-1221	E1028903-00000001-1221	E1028903-000000001-1221	E1028903-000000001-1221	E1028903-000000001-1221	E1028903-000000001-1221	E1028903-000000001-1221	E1028903-000000001-1221
Date shipped	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998
Date Ordered	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5, 1998	Oct 5,	Oct 2, 1998

FIG. 35C

Totals from Oct 4, 1998 to Oct 5, 1998

Total Number of POs: 2

Total Amount of Purchase: \$161,840.00

Total Number of Items Purchased: 858

Products Returns/Repair Tracking Reports Accounting

ccounting Log

FIG. 35 D

<u>Home</u>			Δ	Δ				
Accounting Log Off	ıry	dates.	Vselect year	Vselect year				
Reports	Tracking - Product Return History	Please select month, day, year of start and end dates.	V select day	Vselect day	Sort By: O Manufacturer O Manufacturer Part#	D PO#	# O Buyer	ion Reset
urns/Repair Tracking	Tracking - Pr	Please select month, c	Purchase history between: select month	and: select month	Sort By: O Manufa	O Date	O Invoice#	Take Action
Products Returns/Repair			Purchase history betw					

FIG. 36

FIG. 37

FIG. 37 A

FIG. 37 B

Home

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Off Log Accounting Reports Tracking Returns/Repair Products

Desduct Define History

Tracking - Product Return History

Searching database for requested records.
10 records found. Preparing data for display.

RMA#	Date	Manufacturer	Part#	Description	RMA Qty	PO#	Invoice#	Buyer
R-309257CR	Apr 30, 1998	HP JETDIRECT	J3111A#ABA	JETDIRECT 600N INT ETH COMBO PRINSRVR		E1028903-000000001-0		XXXX
R-309327CR	Apr 30, 1998	HP SUPPLY	C4287A	HP 4MB FLASH DIMM FOR LJ4000 & LJ5000 PRINTERS	5	E1028903-000000001-0		XXXX
R-307154CR	Apr 28, 1998	IBM - CONNECTIVITY	72113482	TURBO TR 16/4 ISA ADAPTER TYPEI TYPE3	_	E1028903-000000001-0		XXXX
R-307017CR	Apr 28, 1998	BELKIN COMPONENTS	GOLD F2N028-06-GLD REPLA GOLD	GOLD VGA MON REPLACEMENT GOLD 6 FT	_	E1028903-000000001-0		XXXX
R-306916CR	Apr 28, 1998	BELKIN	GOLD F2N028-06-GLD REPL GOLD	GOLD VGA MON REPLACEMENT GOLD 6 FT	4	E1028903-000000001-0		XXX

FIG. 37 A

×		T.A.	L'A	
XXXX	XXXX	ANITA	ANITA	XXXX
E1028903-000000001-0	E1028903-000000001-0	E1028903-000000001-0	E1028903-00000001-0	E1028903-000000001-0
∞	001	_	_	-
AT/PS2 KYBD CONVRT	ETHERLINK XL ETH PCI RJ45 NIC	DESKJET 890CXI COL INKJETPR 9PPM 600DPI	SCSI PERIPH CABLE DBS0M/M 6 FT	ACCESS DEV KIT V7.0 CD W95
F2N017	3C900-TPO	C5876A#ABA	F2N966-06	()/17-756V7()
BELKIN COMPONENTS	3COM CLIENT ACCESS	HP DESK	BELKIN COMPONENTS	MICROSOFT
Apr 28, 1998	Apr 28, 1998	Apr 23, 1998	Apr 23, 1998	Apr 13, 1998
R-306885CR	R-306684CR	R-306478XSM	R-306734CR	R-305814CR

Totals from Apr 1, 1998 to May 1, 1998

Total Number of Returns: 10

Total Amount of Returns: \$13,010.00

Total Number of Items Returned: 123

FIG. 37 B

67/437 Home Log Off Accounting Monthly Sales Reports Reports Back Order Reports Shipping Reports RMA Reports Packing Slips Reports Tracking 5 Returns/Repair Products

FIG. 38

FIG. 39

FIG. 39 A	
FIG. 39 B	
FIG. 39 C	

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Products Re	Returns/Repair	r Tracking Reports Accounting Log Off Home
Z	AEGA NETWOI	MEGA NETWORK OPEN ORDER REPORT November 19, 1998
Company Southern California Edison	nia Edison	
Attention: JOONB		
Open orders.		
PO Number - PO D	PO Date - Contact	
E1028903-00000001-1084	00001-1084	7/21/98 CRAIG WILSON (626) 302-6388
Manufacturer	Part#	Description Qty Shipped 1st Last RMAs Notes
DELL	62705	7
PO Number - PO Date	ate - Contact	
E1028903-000000001-1012	0001-1012	6/24/98 CRAIG WILSON (626) 302-6388
Manufacturer	Part#	Description Qty Shipped 1st Last RMAs Notes
DELL	58787	USR, DATA/FAX, 33.6 I 0

-IG. 39 A

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E1028903-00000001-0970 Manufacturer						i		
	-0970	6/15/98 CRAIG WILSON (626) 302-6388	526) 30	2-6388				
		Description	Qty	Shipped	lst Ship	Last Ship	RMAs	Notes
DELL 15342		INTERNAL CD ROM 32X FOR DELL OPTIPLEX XPI	50	0				
DELL   35532		SVC RAILS, DR. LCHAS	20	0				
PO Number - PO Date - (	Contact							
E1028903-000000001-0635	 	4/23/98 CRAIG WILSON (626) 302-6388	26) 30;	2-6388				
Manufacturer Part#		Description	Qty	Qty Shipped	1st Ship	Last Ship	RMAs	Notes
YAMAHA CRW4	CRW4260TIPC	6X/4X/2X REWRITABLE SCSI INT CD-ROM		0				
YAMAHA CRW4	CRW4260TXPM	6X/4X/2X REWRITABLE SCSI EXT CD-ROM		0				
PO Number - PO Date - C	Contact							∭
E1028903-000000001-0516	 	5/4/98 CRAIG WILSON (626) 302-6388	5) 302-	6388				
Manufacturer Part#		Description	Qry	Qty Shipped	1st Ship	Last Ship	RMAs Notes	Notes
IOMEGA 10660		ZIP PLUS 100MB PPT FOR PC OR MAC W/AUTODETECT						
PO Number - PO Date - C	Contact							

FIG. 39 B

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E1028903-000000001-1304	00001-1304	11/5/98 CRAIG WILSON (626) 302-6388	26) 3(	12-6388				
Manufacturer	Part#	Description	Qty	Qty Shipped	1st Ship	Last Ship	RMAs Notes	Notes
COMPAQ SERVERS 169470-B21	169470-B21	6/200 512 <b>K PROC OPT KIT</b> PROLIANT 6500 7000	6	0				
COMPAQ SERVERS 241773-B21	241773-B21	512MB KIT (4X128MB DIMMS) 60NS EDO ECC PROLIANT	2	. ()				
COMPAQ - SERVERS	303607-B21	RACK KEYBOARD DRAWER SHELF KIT	5					
COMPAQ COMPUTER CORP. (SERVERS)	294013-(X)1	REMOTE INSIGHT/PCI (LAN + MODEM)	13					

FIG. 39 C

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Returns/Repair Tracking Reports Accounting Log Off Home	Sales Report	Summary	Option 1 Look up by Date Ranges.	between: select month $  abla$ select day $  abla$ select year $  abla$	and: select month $  \nabla  $ select day $  \nabla  $ select year $  \nabla  $	Take Action Reset	Option 2 Click on the Month you wish to look up.	Nov, 1998 Oct, 1998 Sep, 1998 Aug, 1998	Jul, 1998 Jun, 1998 May, 1998 Apr, 1998	Mar, 1998 Feb, 1998 Jan, 1998 Dec, 1997	
Products Returns/Rep				Sales Records between: select month	and: select		Opi	Nov, 199	1	1 . [	

FIG. 40

FIG. 41

FIG. 41 A	
FIG. 41 B	
FIG. 41 C	
FIG. 41 D	

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Total   Total   Ave   U   Quantity   Cost   C   C   C   C     Quantity   Cost   C   C   C   C   C   C   C   C   C	Returns/Repair	s/Repair	Tracking Reports	ts Acc	Accounting	J Log Off	Off Home
Description   Total   Total   Ave   U   Quantity   Cost   Cost			Sales Report - Oct 23, 1998 - Oct 25, 1998	ı 25, 1998			
Total Quantity         Total Cost Cost Cost Cost Cost Cost Cost Cost			Summary				:
30     57,540       100     149,500       100     0       100     0       30     1,380       30     0       30     0       30     0       100     0	Part Number		Description	Total Quantity		Average Unit Cost	Number of Times Ordered
100     149,500       100     0       100     0       30     1,380       100     0       30     0       30     0       100     0	220-0386		LATITUDE CP, M233ST, 12.1" SVGA, TFT, FACTORY INSTALLED	30	57,540	1,918	
100 100 30 1,38 30 30 60 100	220-0501		DELL P6400GX1/MT+ BASE(100MHZ FSB)W/4MB INTEG VIDEO MEMORY & AUDIO, 512K CACHE	100	149,500	1,495	_
30 30 30 100	310-0019		MICROSOFT SYSTEM MOUSE	001	0	0	_
30 30 30 100	310-0038		PERFORMANCE 104 KEY KEYBOARD FOR WINDOWS 95 FACTORY INSTALL	001	0	0	
30 30 100	310-0039		Performance 104 Key Keyboard for Windows 95. Customer Install	30	1,380	46	_
30	310-2268		REDUCED DOCUMENTATION FOR GXaEM/GNL SYSTEMS, FACTORY INSTALL	100	0	0	
30	310-3043	$ldsymbol{ld}}}}}}$	No Modem For All Dell Notebook	30	0	0	-
	311-0342		64MB, IDIMM, EDO, LATITUDE CP FACTORY INSTALLED	30	0	0	
	311-0509		64MB, NON-ECC, SDRAM, 1 DIMM, 100MHZ, GXI, 350+ MHZ	100	0	0	

FIG. 41 A

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_			1				-					
0	0	0	0	0	0	0	0	0	0	()	0	31
0	0	0	0	0	0	0	0	0	0	0	0	930
001	30	100	100	001	100	30	30	30	30	30	30	30
64MB, NON-ECC,SDRAM, 1 DIMM, UPGRADE, GX1, 350+MHZ, FACTORY INSTALL	20X CD ROM, INTERNAL/EXTERNAL LATITUDE CP FACTORY INSTALL	14-32X CD ROM, IDE, FACTORY INSTALL	MONITOR OPTION-NONE	3.5" 1.44MB FLOPPY DRIVE, FACTORY INSTALL	6.4GB IDE HARD DRIVE, GX1, M/T, 350+ MHZ, FACTORY INSTALL	6.4 GB HD, 12.5MM, LATITUDE CP FACTORY INSTALL	DELL PLUS INFO, PRINT LABEL LARGE	DELL PLUS INFO SKU MANUAL SFTWARE INSTALLATION	DP CONSIGNED LABEL SCE	DELLPLUS SCE CONSIGNED WINDOWS 95 IMAGE FOR THE LATITUDE CP, FACTORY INSTALLED	DELL PLUS ROUTIN SKU	DELL INTEGRATION FEE
311-0515	313-0236	313-0524	320-3316	340-0701	340-0740	340-2166	360-3527	360-4801	360-5087	360-7371	365-0257	365-0366
DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL

-[G. 41 B

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_	_	_	_	_	_	_
0	0	0	8	0	0	0
0	0	0	0	0	0	0
001	30	001	001	001	100	30
FAT32, FILE SYSTEM, WINDOWS 9X, FACTORY INSTALL	WIN95, W/CD all Latitude CP Factory Install	WINDOWS '95 CD ROM, OSR 2.1, FACTORY INSTALL	Active Expansion Riser for GXiM/T Systems, 3 PCV2 Shared/2 ISA Wake up on Lan	SELECTCARE, NEXT BUSINESS DAY ON-SITE SERVICE , INITIAL YEAR, WANG	SELECTCARE, NEXT BUSINESS DAY, ON-SITE SERVICE, 2 YEAT EXTENDED, WANG	Selecteare, Initial Year, Next Business Day On-Site Service Contract, BSC*
420-0137	420-0541	420-6108	430-0118	900-1730	900-1732	0561-006
DELL	DELL	DELL	DELL	DELL	DELL	DELL

FIG. 41 C

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	Total Amount	956'99	166,833	233,790		year	year					
	Status	Complete	Complete	Grand Total: Number of Orders:		Vselect	$\nabla$ select		.dr	Aug, 1998	Apr, 1998	Dec, 1997
Order for this Period	Last Date Products Shipped	11/4/98	11/4/98	8 and Oct 25, 1998	y Date Ranges.	select day	select day	Reset	Option 2 Click on the Month you wish to look up.	Sep, 1998 At	May, 1998 Ar	Jan, 1998 De
Status of each Purchase Order for this Period	PO Date	10/23/98	10/23/98	For the Period between: Oct 23, 1998 and Oct 25, 1998	Option 1 Look up by Date Ranges.	month $\nabla$ se	month $\nabla$ se	Take Action	- Click on the Mon	Oct, 1998	Jun, 1998	Feb, 1998
Statt	PO Number	E1028903-000000001-1299	E1028903-000000001-1298	For the Period b	0	Sales Records between: select mo	and: select mo	T <sub>c</sub>	Option 2.	Nov, 1998	Jul, 1998	Mar, 1998

FIG. 41 D

pair Tracking Reports Accounting Log Off Home	PACKING SLIPS Scarch Options	Option 2. Serial Number:	Option 4. PO Number:	Option 6. Number:	Submit Reset	Option 7. Please click on the month of the approximate ship date	1998 Oct, 1998 Sep, 1998 Aug, 1998	1998 Jun, 1998 May, 1998 Apr, 1998	998 Feb, 1998 Jan, 1998 Dec, 1997	
Products Returns/Repair		Option 1. Asset Tag Number:	Option 3. Invoice Number:	Option 5. Purchase Req. Number:		Option 7.	Nov, 1998	Jul, 1998	Mar, 1998	

FIG. 42

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Home		
Log Off		
urns/Repair     Tracking     Reports     Accounting       PACKING SLIPS for the month of Oct, 1998	E1028903-00000001-1221 E1028903-00000001-1221	
Returns/Repair PACKING SLI	Packing Slip # 17622 17622	
Products		

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105004

Part number

							00/1 .00
785 Palom	ıar Avenue, Sunnyva	785 Palomar Avenue, Sunnyvale, CA 94086 Phone (408) 730-9138 Fax (408) 720-1293	(408) 730-91	38 Fax (40)	8) 720-1293	Oct	Oct 5, 1998
	RETURNS A WITI	RETURNS ALLOWED WITHIN 20 DAYS OF 10/5/98 WITH AUTHORIZED RMA NUMBER	N 20 DAYS RMA NUM	S OF 10/5/ BER	86	M9	M98-28462
For:	SOUTHERN CAL	SOUTHERN CALIFORNIA EDISON					
PO Num:	E1028903-00000001-1228	001-1228					
Bill To:	SOUTHERN CALIFORNIA E 2244 WALNUT GROVE AVI Rosemead, CA 91770 Att: ACCOUNTS PAYABLE	SOUTHERN CALIFORNIA EDISON 2244 WALNUT GROVE AVE., RM#210 Rosemead, CA 91770 Att: ACCOUNTS PAYABLE	Ship To: 0		SOUTHERN CALIFORNIA EDISON 501 S. MARENGO ST BLDG D, SMART#105004 Alhambra, CA 91803 Att: BANCTEC	ORNIA   ST 105004 3	edison
Contact:	CRAIG WILSON (626) 302-6388	(626) 302-6388	PO Num:		Е1028903-0000001-1228	1-1228	
Sales Person	n	Ship Via	Term	FOB	RFQ	PID	PRN

MEGA NETWORK PACKING SLIP

FIG. 44

\* RETURNS SUBJECT TO RESTOCKING FEE \*

SPS-MEM MOD, 128MB, SDRAM

Description

Ground

Charles Wong

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FIG. 45A	FIG. 45B	FIG. 45C
----------	----------	----------

		Sales	es	CSR	Œ	Ac	Acct.	Supervisor	visor	Mg	Mgnt.
		$\supset$	A	n	A	n	A	n	А	n	A
1. Add names.		^	^	>	>	^	>	^	^	>	>
2. Delete/change names.		>	0	>	0	۸	0	Λ	0	^	>
3. Authority to post own quotes.		+	+	+	+	+	+	+	>	+	>
4. Authority to post others' quotes.		+	+	+	+	+	+	+	+	+	>
5. Authority to track own sales status.		+	>	+	>	+	>	+	>	+	<b>&gt;</b>
6. Authority to track own RMA status.		+	>	+	>	+	>	+	>	+	>
7. Authority to track own sales history.		+	>	+	>	+	>	+	>	+	>
8. Authority to track own RMA history.		+	>	+	>	+	۸	+	>	+	>
	- ¦	- ! !	— ! !	— į	- !	— į	_ i	_ i	_   	! ! !	_ i

## **FIG.45A**

SUBSTITUTE SHEET (RULE 26)

			!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	İ		1		!	!	!	-	1
<ul><li>19. Default maximum PO</li><li>\$ amount.</li></ul>	z	+	-1	-1	-	-1		-	-	>	>	
(Send alert & stop MWS posting)	-	-	-	-	-	-	<b>-</b>	<b>-</b>	-	>	>	
<ol> <li>Authority to use credit card purchase</li> </ol>	Z	+	+	+	+	+	+	+	+	۸	^	

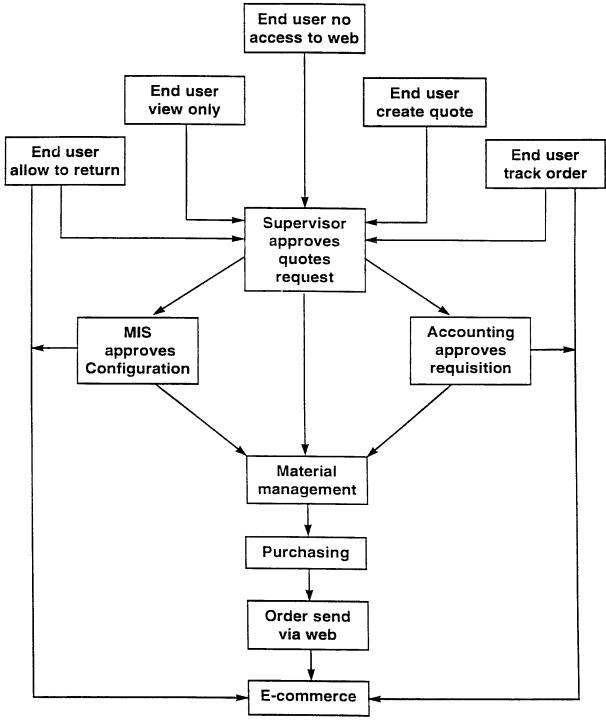
N = Blocked view, only management has view.

+ = Add, but cannot activate web acitivity.

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v = Add, and activate web activity. O = Block out, not applicable. WO 99/33016 PCT/US98/27496.

85/437 Typical Lineage (Authority) Tree



**FIG.46** 

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٩		Customers: Modify Record	tomers: M	odify Recorc	
Customers				12:00 AM	7
Company Name:		Company Code:	Seq#: 833	Sales Rep Code: LOU,LECCHE	انة
	Fax: (408) 945- 1080		LOUIS	LOUIS LUCCHESI	
08) 945- 0808X115			Key	Keywords	
Company Address TWINHEAD CORPORATION		<u>U</u> :			
1537 CENTRE POINTE DR. Click to Milnitas CA 95035		+	+		
			I Zun		
CustomerNotes: Will be displayed when the customer is used on an MWS	sed on an MWS.	Margin:	☐ Post with RFO	ZFO Default	
	L	15	Post with PID		-
	1	Terms:	Post with PRN	_	
		Ship Via:	No Zero Cents	nts 0	
			Core Products days	days:	
		Instal Price: 0	On Site Def:	FOB: Orig	
Addresses Comp address below is the same as address in grey box above.	grey box above.	g		☐ No FOB Adj	
TWS Col	Address 1		City		4
✓ Bill TYINHEAD CORPORATION Chen	1537 CENTR	1537 CENTRE POINTE DR.	Ξ		
Ship T'W INHE AD	1537 CENTR	1537 CENTRE POINTE DR.	Ξ	Milpitas	
					1
					<b>)</b> [
Ship To Default Onotes	Delete (	Duplicate (	Edit	Add (	$\overline{\Box}$
No Partial S. B.					^
	FIG. 47				

SUBSTITUTE SHEET (RULE 26)

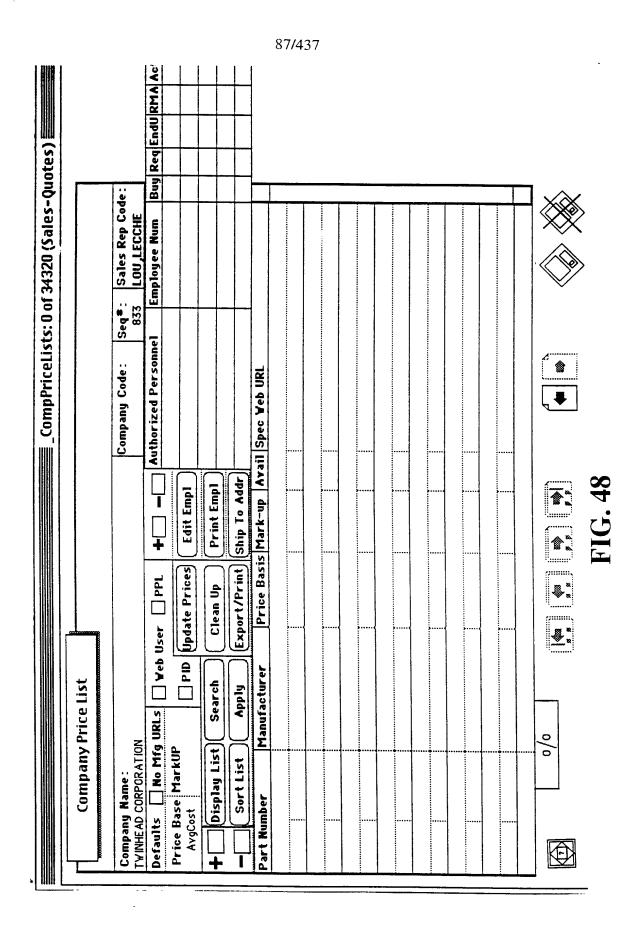
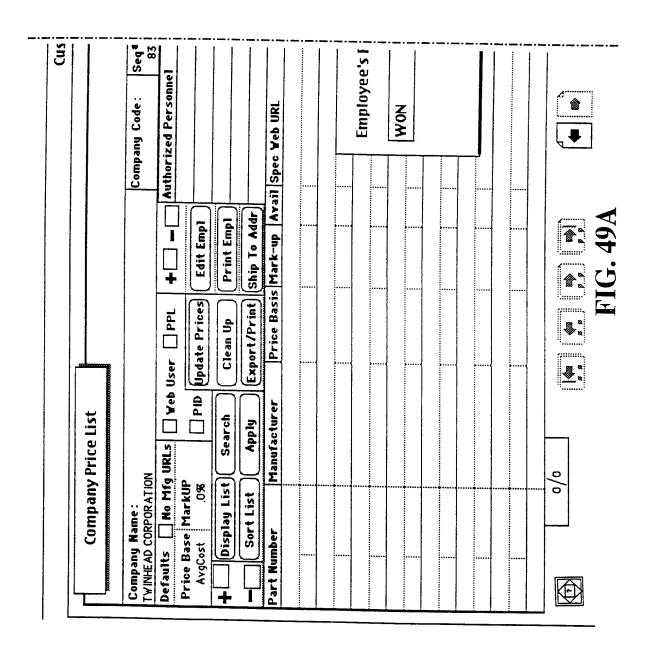


Fig. 49

Fig.49A Fig.49B
-----------------

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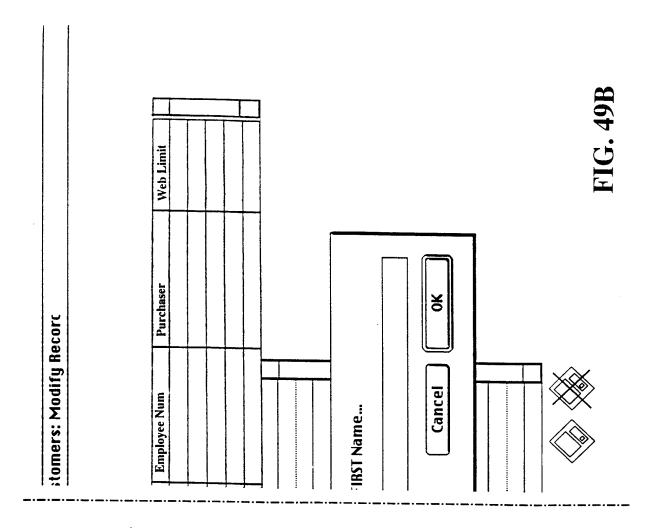
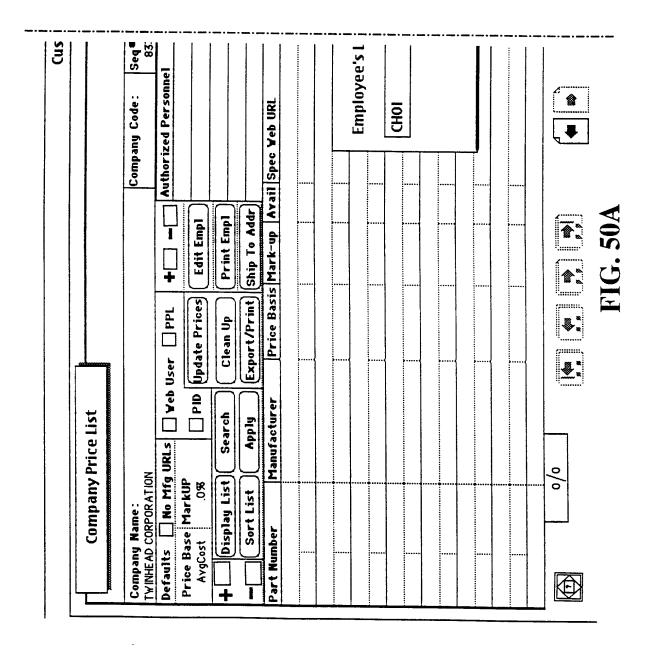


Fig. 50

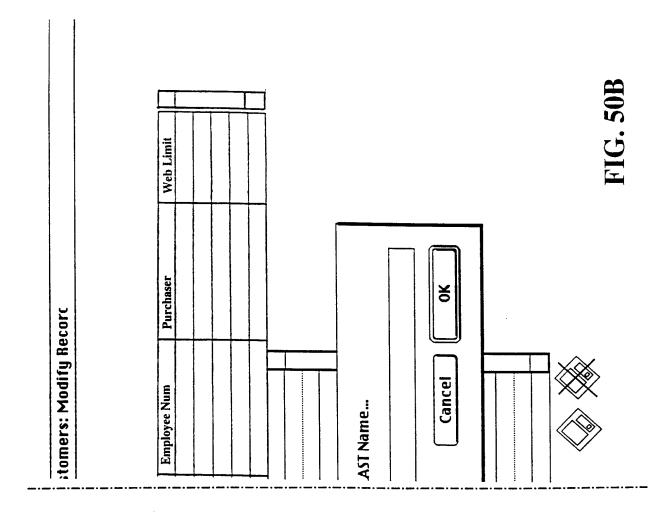
Fig.50A	Fig.50B

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SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

Fig.51

Fig.51A	Fig.51B
!	

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Compan	y Price List		
Company	Name:			
Defaults	AD CORPORA No Mfg			
Price Ba	ise MarkUP	***************************************	Web User	+
AvgC			Update Prices	Edit Empl
+	Display List	Search	Clean Up	Print Empl
-	Sort List	Apply	Export/Print	Ship To Addr
Part Nu	mber	Manufacturer	Price Bas	is Mark-up A
		•	······································	·····
			<u>.</u>	
•••••		•		
	-i			
		•		······································
•••••	<u>:</u>			<u> </u>
		•		
		0/0		<b>&gt;</b>

**FIG. 51A** 

uthorized Personne	833 En	LOU,LECCHE	Purchaser	Yeb Limit
1 Spec Yeb URL				
Spec <b>Y</b> eb URL		***		
Spec <b>Y</b> eb URL		<del></del>		
Spec Yeb URL				
			umber (leave	
to ge	nerate	a number).		
		Cancel	OK.	

**FIG. 51B** 

Fig. 52

Fig.52A	Fig.52B

TW INHE	any Name: AD CORPORAT	ION						Compar	y Co
Defaul		fg URLs	☐ ¥eb l	Jser 🔲 F	PPL 4			huthoriz	ed P
	Base Marku Cost .09		☐ PID	Update Pr	ices	Edit Emp	-		
+	Display Lis	t Sea	arch (	Clean U		Print Em	p1		
-[	Sort List	Ap	ply	Export/P	rint SI	nip To A	ddr		
art N	umber	Manufa		*******	******	1ark-up		il Spec	reb
			•••••	······································					
	:						┷─ſ		
<b></b>									IS
***************			•••••••••••	:	······································	•••••••	· · · · · · · · · · · · · · · · · · ·		not we
					· · · · · · · · · · · · · · · · · · ·	<u> </u>			***
************			••••••			••••••	·		
				······					_
						-			
		:							

**FIG. 52A** 

		99/437		
Cu	stomers: Modify R	ecorc		
				<del></del>
e: <b>Seq</b> <sup>4</sup>				
sonnel	Employee Num	Purchaser	Web Limit	П
 L				
ON CHOI a e/she w quotes.	uthorized to make ill be able to creato	web purchases • but NOT SUBMI	5? If T	
ancel	No	Yes		
*				

**FIG. 52B** 

Fig. 53

Fig.53A	Fig.53B

int Empl o To Addr rk-up   Avail   Spec Ye
int Empl
rk-up Avail Spec Ve
***************************************

**FIG. 53A** 

d .		istomers: Modify R		
What is WON CHOI's purchase limit (0=No limit)				
What is WON CHOI's purchase limit (0=No limit)			Purchaser	Web Limit
What is WON CHOI's purchase limit (0=No imit)				
What is WON CHOI's purchase limit (0=No imit)				
What is WON CHOI's purchase limit (0=No imit)				
imit)				_
	1/14-4:-	WON CHOU		1
	What is limit)	WON CHOI's purchas	se limit (0=No	

**FIG. 53B** 

Fig. 54

Fig.54A	Fig.54B

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INHEA	ny Name: AD CORPORATI	ON						Company C
fault	••••••	g URLs	. 🗌 ¥eb	User	PPL	+	^	uthorized (
rice i AvgC	Base MarkU ost .0%	-	PID	Upda	te Prices	Edit Emp	1	
	Display Lis	t) Se	arch	CI	ean Up	Print Em	( <del> </del> -	
<b>-</b>	Sort List		pply			Ship To A	<del></del>	
rt Nu	ımber	Manuf	acturer		*****	s Mark-up		1 Spec
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**FIG. 54A** 

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**FIG. 54B** 

Fig. 55

Fig.55A	Fìg.55B

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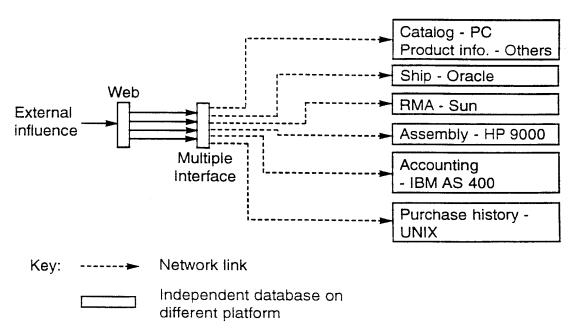
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**FIG. 55A** 

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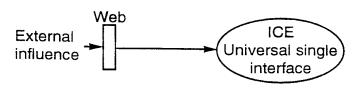
**FIG. 55B** 

## Conventional



**FIG.56** 

## ICE

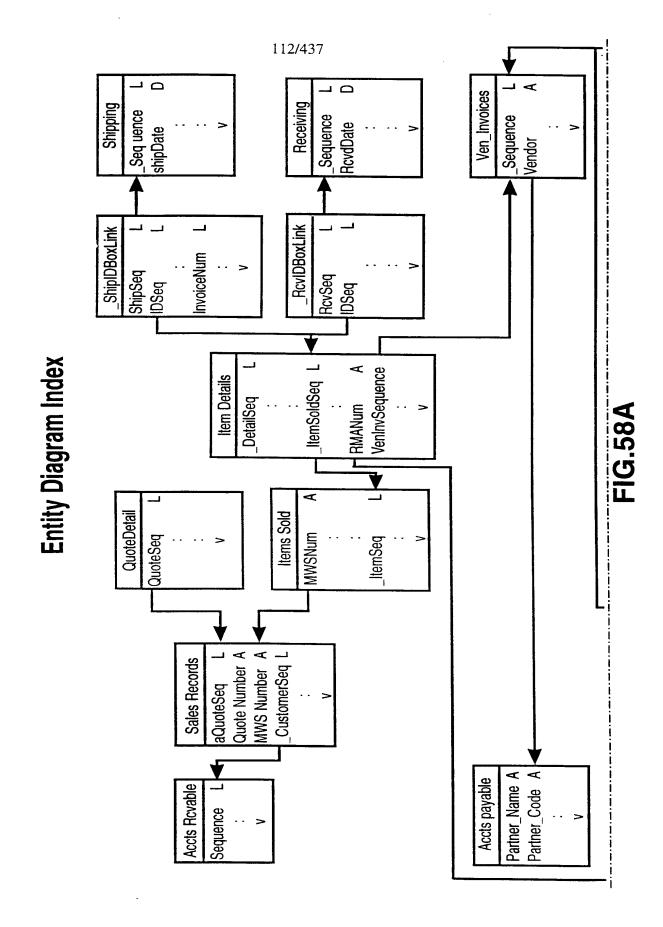


Independent database on different platform

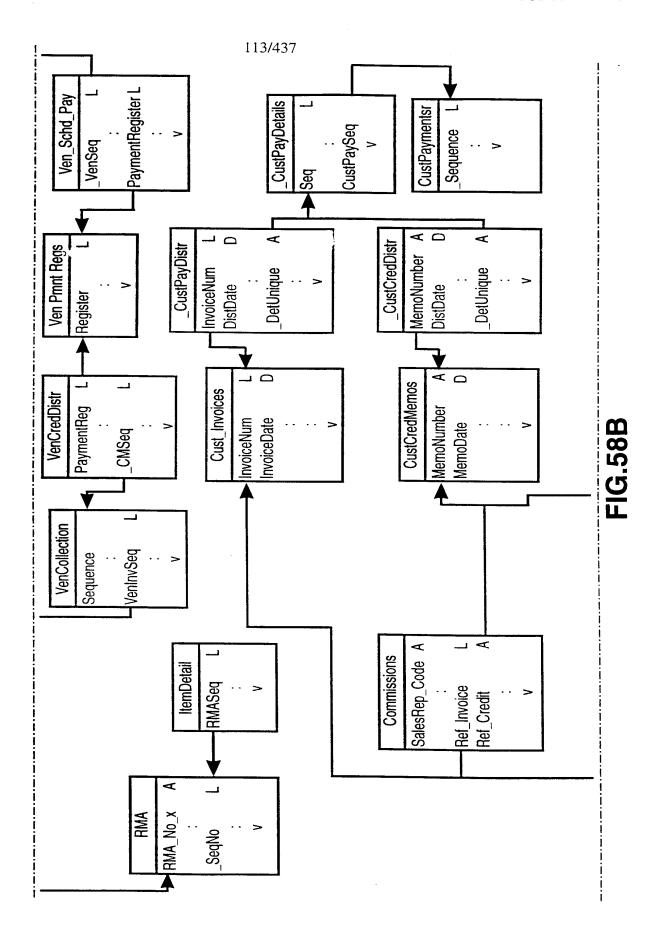
## **FIG.57**

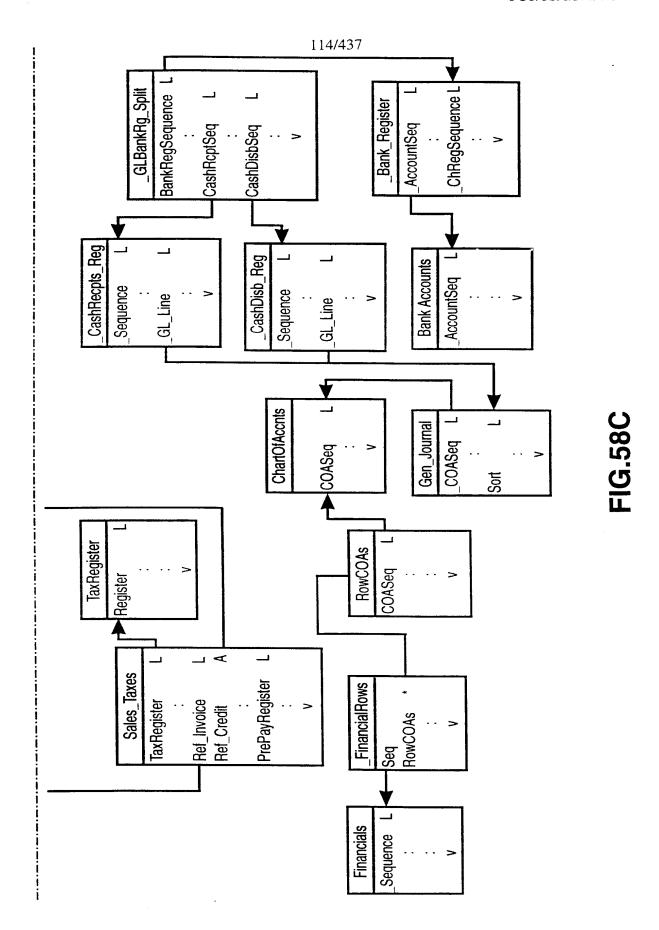
Fig. 58

Fig. 58A
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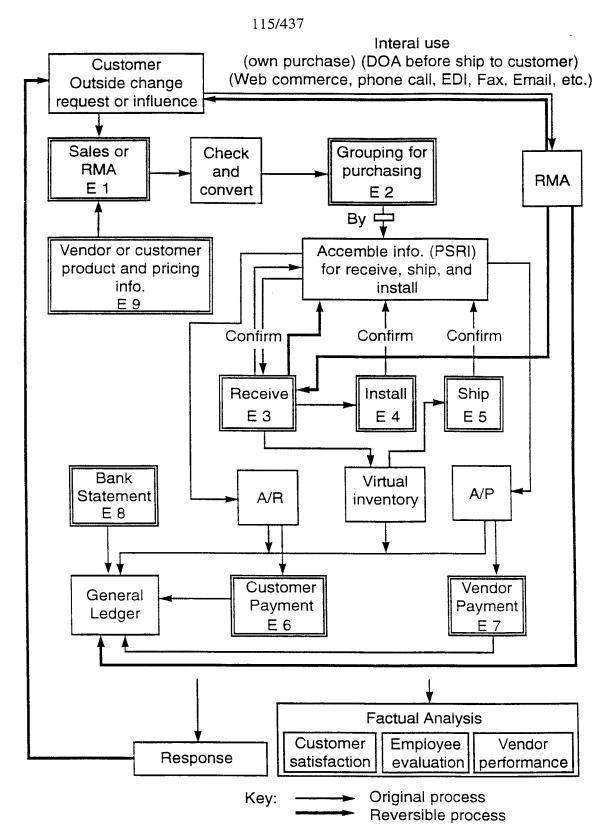


FIG. 59

Fig. 60

Fig.60A	Fig.60C
Fig.60B	Fig.60D

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MWS No. date	Status	Customer	¥ Cust	SRep	Ē	¥ RMA No.
			Partia10K	KeithS	4	
097-24525 5/22/97 Keith.888		KURT KIKKERT (415) 222-7512 (415) 222-7968	NA			
		UC Berkeley NoPa	artial	D AVID L	=	
097-24526 5/22/97		RONALD GRÍFFITH (510) -642-1774				
David. 111		(510) -643-9117 TP0	0218			
			NoPartial	CURTIS.L	6	
097-24524 5/22/97		KAREN MIXER (415) 859-2488 (415) 859-4812 TP0	TP0221			
	Shipped	JNION BANK OF CALIFORNIA LOS ANIN	artial	CURTIS.L	-	
29/62	5/30/97	DENNIS BAKER(415)296-6576		mer	-	
denniø baker		(415) 296-6568 6310006926		\$193 11.3%		
M97-24897	Shipped	FIRST DEPOSIT NoPartial	artial	KeithS	1	
097-24528 5/23/97	5/29/97	KURT KIKKERT (415)		omer	_	
Neme 9 to . CCC		(415) 222-7988 20169-44952-38041	•	\$85 26.9%		
M97-24913	Shipped	UNION BANK OF CALIFORNIA LOS ANINoPartial	artial	CURTIS.L	-	
29/62	2/30/97	DENNIS BAKER(415)296-6576		mer	<del></del>	
dennis baker		(415) 296-6568 6310008925		\$193 11.3%		
	WebQuote	<u>ORACLE</u> NoPartial	artial	KeithS	2	
Q97-24530 5/23/97 SEJIN HAN	2/30/65					
	Shipped	UNION BANK OF CALIFORNIA LOS ANINOPartial	ırtial	CURTIS.L	4	
097-24532 6/18/97 dennia baker	6/30/97	DENNIS BRKER(415)296-6576 (415) 296-6568 6310009060	-	Customer \$36,379 6.18	4	
	Shipped	FIRST DEPOSIT NoPartial		KeithS	-	
1	5/28/97	ONY 415-222-7684		mer	_	
Nemes to. ccc		(415) 222-7903 20201-43/84-N	•	\$147 25.8%	-	
		Gasonics International NoPartial	ırtial	CURTIS.L	4	
097-24534 5/23/97		JENNIFER WHEELER (408) 570-7313	9			
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FIG. 60A

118/437

									Options Update (1)
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097-24531 5/23/97	<b>M97-24920</b> 097-24536 6/2/97 0avid.111	097-24535 5/23/97 Richard.cc	M97-24899 097-24537 5/23/97 Nemegio.ccc	Q97-24538 5/23/97 Keith. 888	2 <b>4919</b> 539 6/2/97 Dave www	M97-24947 097-24540 6/11/97 CURITS LAU	Q97-24541 5/23/97 Nemesio.ccc	<b>M97-24901</b> Q97-24542 5/27/97 Nemaaio.ccc	Fast Dsp
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FIG. 60B

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30274 304289 6/18/97	MYS No.   date   Comments Cancel
	Q97-24534 5/23/97   Good quote

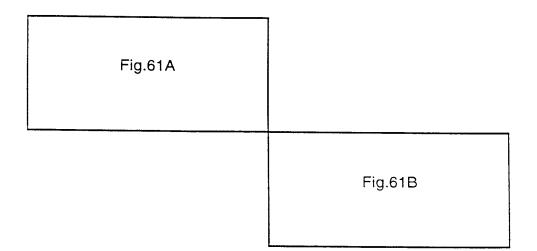
FIG. 60C

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13/97 13/97 179/2 179/2 179/2 179/7	997-24538 5/23/97 930-24539 6/2/97 997-24539 6/2/97 CreditCard M97-24947 997-24540 6/11/97 N10 M97-24541 5/23/97 N30 M97-24541 5/23/97 N30 N30 N30 N30 N30		ETA: 05	/60/9	Q97-24531 5/23/97     Good quote
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FIG. 60D

Fig. 61



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	<sub>0</sub> mer	Vo. <u>Notes</u> 222-7512	Ship to:	PROVIDIAN BANCORP, INC.	150 SPEAR ST 2nd FLOOR RECEIVING	San Francisco, CA 94105	-Manfetr -Manfet Part # V-Pt #-ShTup-PIt-MC lotu-W Pur-Cost-SIs Imrgin-status leach-PRICE-extud 3/2	8.1	118.97 Shipd	55	26/9/9				<b>5</b> 8		& handling)		Print MWS	Show Quote	Cancel MWS	
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	5/22/97 6/3/97	
Company	Contact person & Phone No.	
FIRST DEPOSIT	KURT KIKKERT (415) 222-7512	222-7512
Customer notes (do not appear on MWS)	Notes that fit in box vill fit on printouts of quotes. Customer notes only print out on quotes.	
MVS comments (do not appear on Quotes) Reviewd ETA: 06/06/97	Reviewd by Nemesio.ccc Ter	Temporary notes
Comments that fit in box will fit on printouts of MWS. MWS comments only print out on MWS.		
Shipping notes	Backup notes	

## FIG. 61B

Fig. 62

Fig.62A	Fig.62B
Fig.62C	Fig.62D

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<ul> <li>new product or special offer</li> </ul>		Dealer price
Description Ven Ven Part No.   Media Cd   Plati	Media Cd Platform   Manufacturer	Mfct Part No.
ACCEL GRAPHICS AGS00-010 Cmplnd   ACCL-404072   INTL   PC/AT	T WYLE LABORATORY	AG500-010
16MB KIT F/HP YECTRA YL/4		
CmpInd ADMO-B0416	ADMOR MEMORY LTD	ADH16-3647
32MB F/HP 0MINB00K 5000		
Cmpind : ADMO-B1136	ADMUK MEMUKY LID	; ADH32-1136
PH0T0SH0P 3.0 MAC/P0WERPC DISK/CD * DR0P SHIP ONLY TO BRANCH #0091 **	OP SHIP ONLY TO BRANCH #0	1091 **
CmpInd AD08-023702	DOUGLAS STEWART COMPAN 23702	AF 23702
FRAMEMAKER UPGRADE FOR WIN 5.1.1 *SERIAL NUMBER REQUIRED*	AL NUMBER REQUIRED*	
Cmplnd ADOB-N1294	ADOBE SYSTEMS, INC.	2791-0017
8MB LP486 SIMM KIT W/GOLD LEAD		
Cmplnd AMG -B7040	ATLANTIC MEMORY GROUP II 101 70040	> II 10170040
32MB UPGRADE F/LP486 W/GOLD LEAD		
CmpInd AMG -B7050	ATLANTIC MEMORY GROUP II 101 70050	) II 10170050
8MB KIT F/LP466 WITH TIN TEAD		
CmpInd AMG -B7100	ATLANTIC MEMORY GROUP II 10170100	00107101
8MB CLASSIC R+ MODULE		
CmpInd AMG -B7222	ATLANTIC MEMORY GROUP II 10170222	· II 10170222
SAFEJACK ADAPTER DUAL RJ11		
CmpInd ANGI-J0194	ANGIA CORPORATION	SJADP
UPS MONITORING BOARD W/CABLE, ISA		
CmpInd APC -C677U	AMERICAN POWER CONVERS   AP9500	SI AP9500
	VCY JIJ	

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Base	Price	2,804.95 Import	105.34 Import	275.88 Import	182.53 Import	199.64 Import	110.35 Import	300.96 Import	90.29 Import	75.24 Import	12.04 Import	46.15 Import
Her markup Retail	Price	3,495.00 12/1/96	149.00	349.00 12/1/96	279.00	205.00	170.00	465.00 12/1/96	139.00	115.00	19.00	89.00 12/1/96
s include reseller markup  Dealer Retai	Price	2,889.09	108.50	284.15	188.00	202.62	113.66	309.98	92.99	77.49	12.40	47.53

FIG. 62B

127/437

CmpInd   APC - C678U	NOYELL INTERFACE CABLE MICRO CHANNEL	
AMERICAN POWER CONVERSI   AMERICAN POWER P	CmpInd APC -C678U	AMERICAN POWER CONVERSI AP940-0012
AMERICAN POWER CONVERSI   AMERICAN POWER	MATRIX CASTERS	AMERICAN POWER CONVERSI MX A006
AMERICAN POWER CONVERSION   AMERICAN POWER CONVERSION POWER POWE	SURGE MOD P7, 7 OUTLETS, 3.5' CORD UL 1449	400Y) CSA APPROVED, 15 AMP
NETWORK SURGE PROTECTOR ETHERNET 10BASE-T	Smplnd APC -H0007	AMERICAN FOWER CONVERSION
AMERICAN POWER CONVERSI   NETWORK SURGE PROTECTOR ETHERNET 10BASE-T	NOTEBOOK SURGE PROTECTOR RJ11 CORD	
HODEM PROTECTOR ETHERNET 10BASE-T AMERICAN POWER CONVERSI BRACKET HOO13 HODEM PROTECT/NET DATA LINE SURGE SUPPRESSION HODEM PROTECT/NET DATA LINE SURGE SUPPRESSION HOO14 DK3 IBM PC OI COMMUNI WORKGROUPS  CHAPTER OF CONVERSI DK3 IBM PC OI COMMUNI  CHAPTER OF COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI DK3 IBM PC OI COMMUNI	CmpInd APC -H0008	AMERICAN POWER CONVERSI PNOTE1
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HODEM PROTECT/NET DATA LINE SURGE SUPPRESSION HODIA HO	CmpInd APC -H0010	AMERICAN POWER CONVERSI P10BT
MORKGROUPS    AMERICAN POWER CONVERSION   AMERICAN POWER CONVERSION     AMERICAN POWER CONVERSIO	WALLMOUNT BRACKET	
HODEM PROTECT/NET DATA LINE SURGE SUPPRESSION HOO14  DK3  BMPC  OI COMMUNI  DK3  BMPC  OI COMMUNI  DK3  BMPC  Outek Ven LU  Outek Pifet LU  Ou	CmpInd APC -H0013	AMERICAN POWER CONVERSI APO13
WORKGROUPS  DK3   IBM PC   OI COMPUNI  DK3   IBM PC   OI COMPUNI  CR   Ouick Ven LU   Ouick Ven LU   Ouick Ven LU   Ouick Ven LU   Ouick Mifet	TELEPHONE/MODEM PROTECT/NET DATA LINE SU	RGE SUPPRESSION
WORKGROUPS    DK3   IBM PC   O1 COMPUNI     DK3   IBM PC   O1 COMPUNI     CR	mpind APC -H0014	AMERICAN POWER CONVERSI PTEL 1-4
WORKGROUPS WORKGROUPS    DK3   IBM PC   OI COMMUNI   Ouick Ven LU   Ouick Ven LU   Ouick Mifet LU   Ouick Mi	01/FAX	
WORKGROUPS    DK3   IBM PC   O1 COMMUNI   Quick Ven LU	DK3	01 COMMUNI 21-001392
DK3   IBM PC   O1 COMMUNI  CBA   CAT   Ouick Ven IU   CAT   Ouick Mfet IU   CAT   CAT   Ouick Mfet IU   CAT    01/FAX FOR WORKGROUPS		
	DK3	01 COMMUNI :21-001892
New Records		

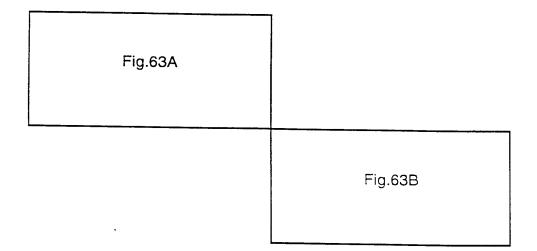
FIG. 62C

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<u>:</u>
3/15/97

WO 99/33016 PCT/US98/27496

Fig. 63



130/437

Contact Person & Phone No.   Notes   Eax	(408) 982-3400  EMS, INC. ssway  0052 inkhorst  = each-PRICE-extnd
1/1/93 Commission	61.70

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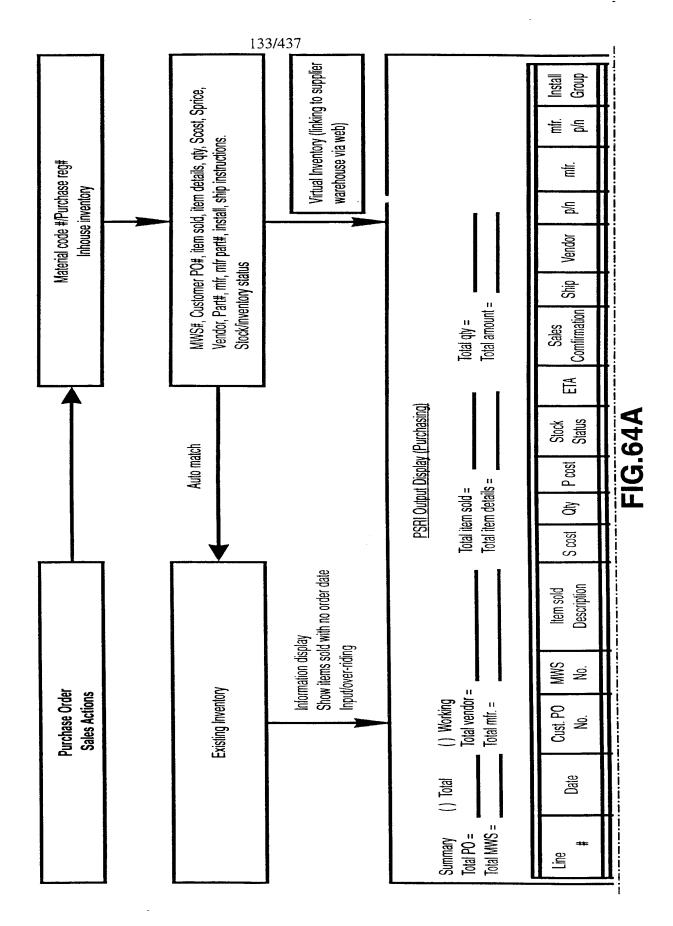
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ð	200020 W-530002	
2	12/28/92	
Company	Contact person & Phone No.	
FUJITSU-ICL SYSTEMS, INC.	Gerry Binkhorst (408) 982-3350	
Customer notes (do not appear on MWS)	Notes that fit in	
	box will fit on printouts of	
	quotes. Customer notes	. 12m
	only print out on quotes.	
MYS comments (do not appear on Quotes) Reviewd by	Temporary notes	
Comments that fit in box will fit on printouts of MYS. MYS comments only print out on MVS.		
Shipping notes	Backup notes	
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FIG. 63B

Fig. 64A

PCT/US98/27496



				Compaq SCSI HD			B/0						(			
<b>-</b>	10/11/97	1556-WX	28515	Critical	c —			12/11/9/	Credit card	È	lechdata 	12345	12345 Compaq 121-001	121-001	<b></b>	
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,	10/11/07	VQYYYY	31786	HP Vectra			short stock			c	Ingram					13
<del>1</del>	10/11/3/	4441.8	C1 +07		 				COD	<b>-</b>	Micro	13554	웊	HR-001	2	34/437
t.	10,49704	10777	00445	НР тетогу			Inventory				Historia		9	100	c	7
വ	10/11/9/	1444PA	78413		-					<b>-</b>	MICTORGE	13554	Ė	Ir-001	2	
,		10,77		HP Printer			B/0				Computer			;		
9	10/11/97	1444PA	CI 497	Drop Ship	200					A N	land	13554	#	H1-0Aa	2	
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'All items are	* All items are selectable and expand (double click) into item deails.	axpand (double	click) into i	tem deails.	* Replacement MWS = Red color	t MWS = F	Red color									
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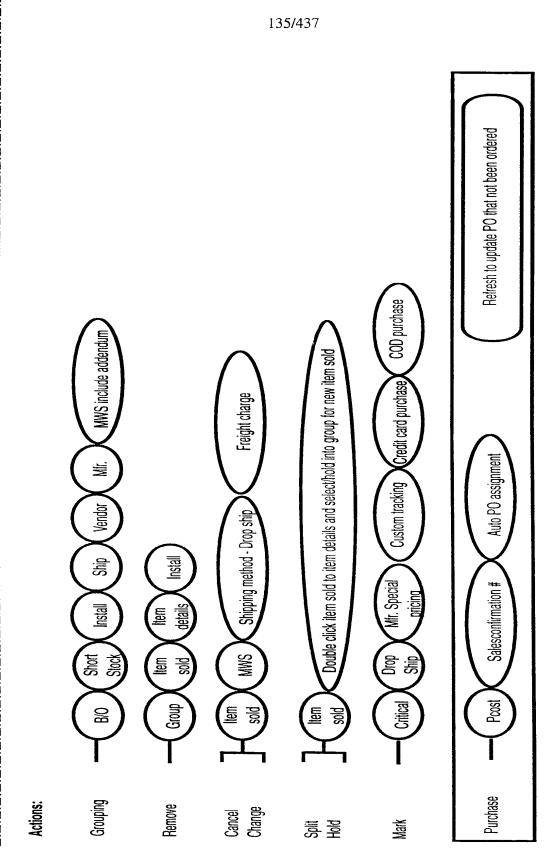
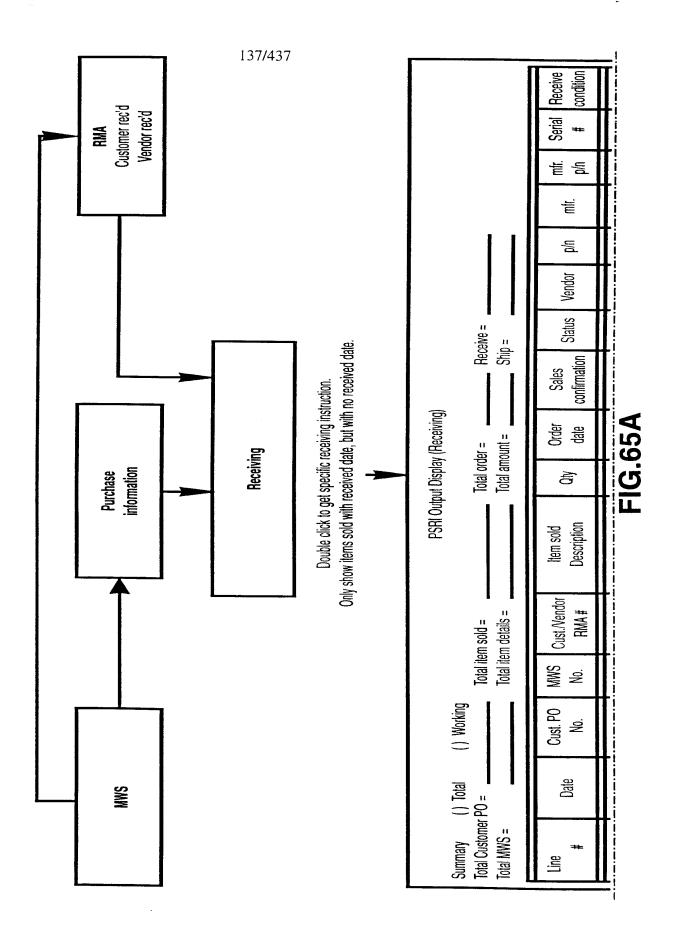


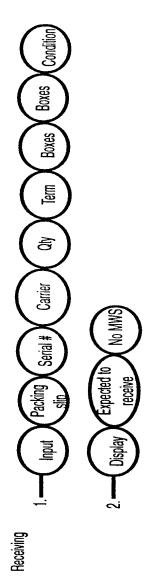
Fig. 65

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		40/44/07	AEEG MIV	700.45		Compaq proliant	77	11/20/07		Refuse	- - -					
	2	16/11/91	VM-0001	CI 007		Track	.5	11,50131			lechdata	13554	Compaq			
		20/11/07	AEEE MV	00515		Сотрад тетогу	\$	11/19/97		stock						
	, j	16/11/01	V#-000	61007							Merisei	4000	Compad			
<u> </u>	,	40/44/07	44404	20145		HP Vectra	c	14 00 00		) X	Ingram		-			7
	4-	10/11/97	1444FA	C1407			9	11/20/97	000		Micro	13554	<del></del>	<del></del>		38/437
	L	40/44/07	¥UYYY	20115		НР тетогу	4	11/21/97		Ж		7.1.0	9			
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	,		2011	777		HP Printer	006	44149/07		×	Computer		!			
	۵	10/11/9/	1444PA	C1 497		Drop Ship	007	167111		Note	land	13554	<del></del>			
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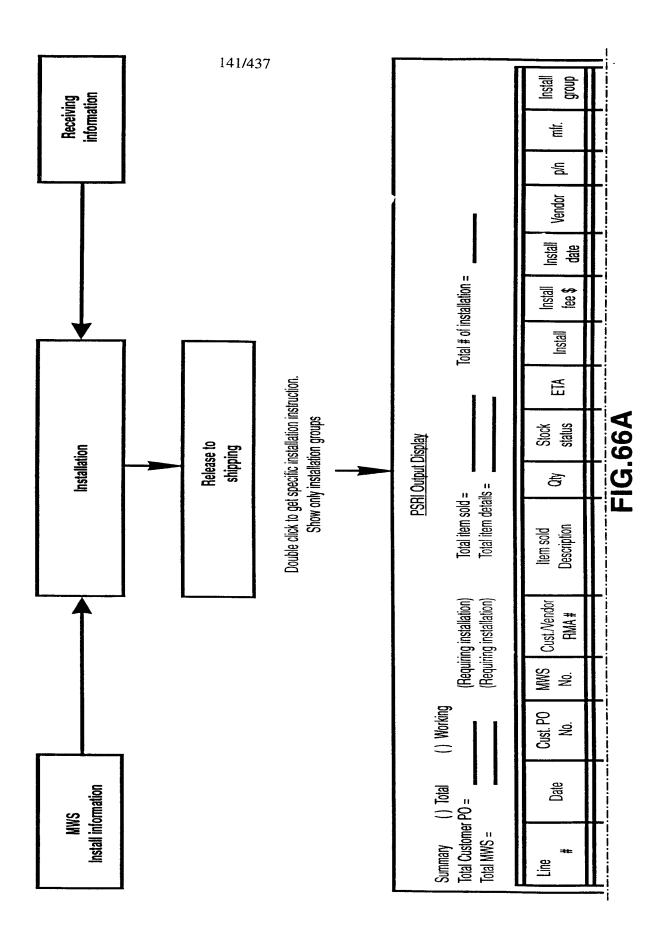
Actions:

1. Expected to receive will exclude refusal items.

3. — Notes.

Expected to ship will exclude refusal items, hold items and items with COD/cash term.
 Batch input for all packing slips and items. The system automatically match input with items that existing in the system to all items that received.

Fig. 66A
Fig. 66C



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	10/11/9/	1556-WX	28515		Critical	ئ	Notes	12/25/97	>		Techdata		12345 Compaq	 
•	£9(11)01	VIII	000		Compaq proliant	r <sub>o</sub>	B/0					14407	c	
2	10/11/9/	1330-WA	CI C97		Track	<del>†</del> 5	Notes	12/11/9/	2		lecndata	13554	13554 Compaq	
	40/44/07	אבכ ואוא	200		Сотрад тетолу	9	stock		>		Marical	13554	Compan	
כי	16/11/6/	VM-0001	01007			2	Notes	•	<b>&gt;</b> -			3		
1	10/11/07	1444PA	28415		HP Vectra	٠٠.	Short stock		>		Ingram	13554	유	142/43
-						•	Notes	•	_		Micro			) /
1	Common	107777	2071		НР тетогу	7	stock		^		Microana	1255/	9	
ഒ	10/11/97	1444PA	CI 407			-	Notes	•			wici oayo			-
		107	71100		HP Printer	UUC	B/0				Computer		9	
٥	10/11/97	1444PA	C1497		Drop Ship	007	Notes	12/5/97	>-		land	15534	<del></del>	
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* All items are s	electable and er	All items are selectable and expand (double click) into item deails.	click) into ite	em deails.	* Replacement MWS = Red color	MWS = Re	ed color	7 7	1. Show all	<ol> <li>Show only need to be installed with received date</li> </ol>	lled with recei	ved date		· · · · · · · · · · · · · · · · · · ·

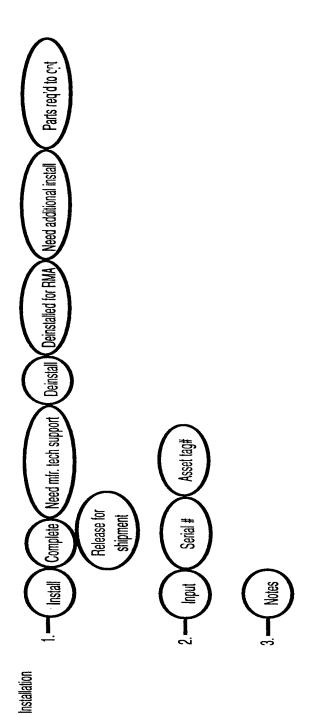
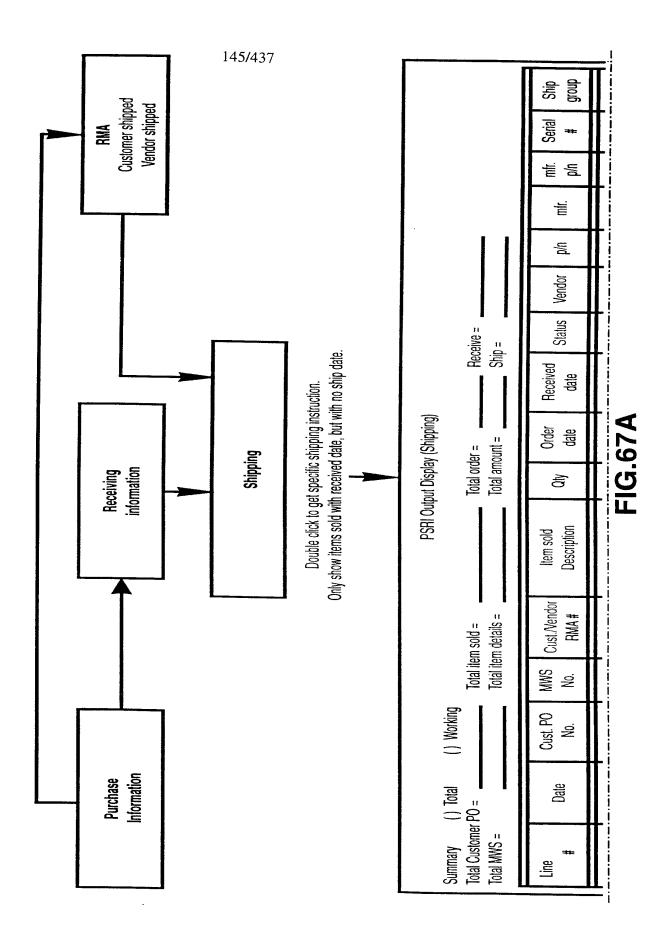
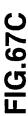


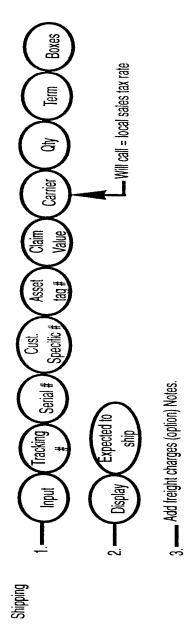
Fig. 67A
Fig. 67B
Fig. 67C



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Critical	Compaq proliant	Track	Сотрад тетогу		HP Vectra		НР тетогу		HP Printer	Drop Ship		* Replacement MWS = Red color
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	10/11/07	16/11/9/	10/41/07	10/11/31	10/11/07	611101	10/11/07	1011131	100	10/11/9/	= All hea	ectable and exp
-	<	7	c	<b>7</b> 3	_	r	L	7	c	O		* All items are selectable and expand (double click) into item deails.
	Critical	Compaq proliant 24 14 20 007	Compaq proliant   Compaq proliant   Compaq Pro	Compaq proliant	Oritical         Critical         Compaq proliant         24         11/20/97         Refuse         Techdata           10/11/97         1556-WX         28515         Compaq memory         10         11/19/97         stock         Merisel	10/11/97   1556-WX   28515   Compaq proliant   24   11/20/97   Techdata   Techdata   Techdata   10/11/97   1556-WX   28515   Compaq memory   10/11/97   1556-WX   28515   Compaq memory   10/11/97   14/4P& 28515   Compaq memory   10/11/97	10/11/97         1556-WX         28515         Compaq prollant Track         24 11/20/97         Refuse Torbidate Torbidate Track         Refuse Torbidate Torbidate Torbidate Track         Propried Track         Compaq memory 10/11/97         10/11/97         11/19/97         Stock Merisel Torbidate Tor	10/11/97   1556-WX   28515   Compaq proliant   24   11/20/97   Refuse   Track   Track   Track   10/11/97   1556-WX   28515   Compaq memory   10   11/19/97   Stock   Ingram   10/11/97         1556-WX         28515         Compaq proliant Track         24 Tri20/97         11/20/97         Refuse Techdala Techdala Track         Techdala Techdala Track         Amerisel Microage           10/11/97         1556-WX         28515         Compaq memory         10         11/19/97         Stock Merisel Microage         Microage           10/11/97         1444PA         28415         HP memory         4         11/21/97         OK         Microage	Compaq proliant 10/11/97 1556-WX 28515 Compaq memory 10/11/97 1556-WX 28515 Compaq memory 10/11/97 1444PA 28415 HP memory 10/11/97 1444PA 28415 HP memory 4 11/21/97 OK Microage Microage OK Computer 200 A 11/21/97 OK Computer 200 A 11/21/	10/11/97         1556-WX         28515         Compaq proliant Track         24   11/20/97         Refuse Techdala Refuse Track         Prefuse Track         Pref	2         10/11/97         1556-WX         28515         Compaq proliant Track         24         11/20/97         Refuse Stock         Pechdata           8         10/11/97         1556-WX         28515         Compaq memory         10         11/19/97         3         11/20/97         Stock         Merisel           1         10/11/97         1444PA         28415         HP Printer         4         11/21/97         OK         Microage           1         10/11/97         1444PA         28415         HP Printer         200         11/12/97         OK         Computer	





Actions:

Expected to receive will exclude refusal items.

Batch input for all packing slips and items. The system automatically match input with items that existing in the system to all items that received. 2. Expected to ship will exclude refusal items, hold items and items with COD/cash term. 3. Batch input for all packing slips and items. The system automatically match input with

Fig. 68

Fig. 68A	Fig. 68B
Fig. 68C	Fig. 68D

Item
 Select (highlight)

# ltem d

Line #	Date	Cust.PO No.	MWS No.	Cust./Ven RMA#	Item sold Description	Qty
1	10/11/97	1556-WX	28515		Compaq SCSI HD	
			20010	·	Critical	1
2	10/11/97	1556-WX	28515		Compaq SCSI HD	
					Critical	1
3	10/11/97	1556-WX	28515		Compaq SCSI HD	
					Critical	1
4	10/11/97	1556-WX	28515		Compaq SCSI HD	_
			20010		Critical	1
5	10/11/97	1556-WX	<b>285</b> 15		Compaq SCSI HD	_
					Critical	1

Fig. 68 A

				150/437				•
	details inp	out						
!!!!!!!!!	to group		<b>-</b> 1					
<u>-</u>	etail Disp	aly						
	Existing Satus	Cust. Inv.	Ven. Inv.	Serial#	Vendor	mfr	Install Group	Ship Group
	В/О							
	B/O							
	В/О							
	B/O							
	B/O							
								····

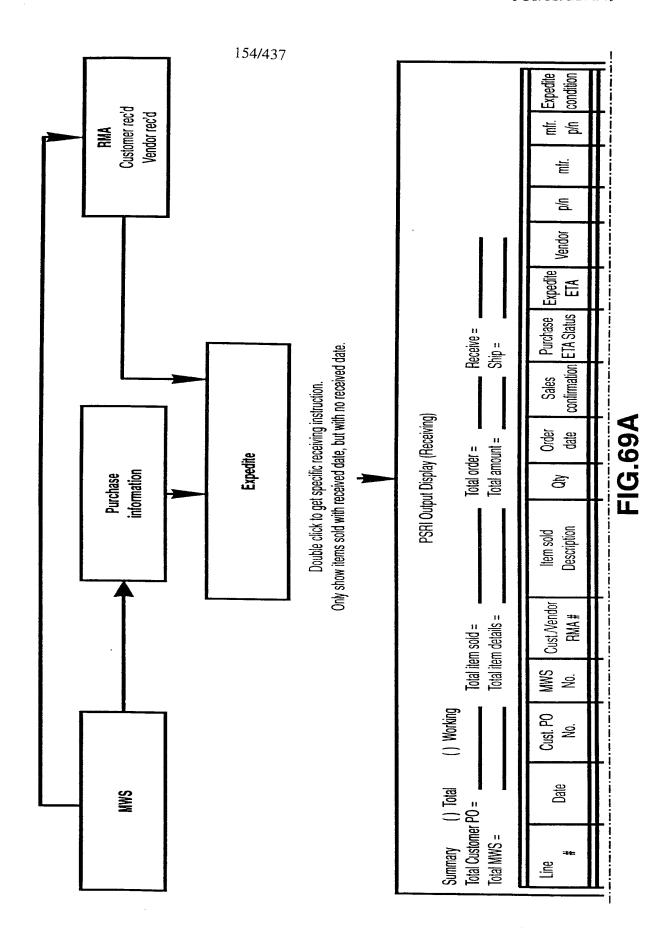
Fig. 68 B

* All items are selectable and can be ma *Replacement MWS = Red color	I headings ar	
Unique installation note:		Unique shipping note:
Standard default notes from custmer file	St	andard default shipping n
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Fig. 68C

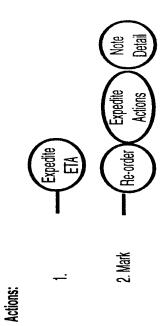
	Existing status can be ordered
	Existing status can be received
	Existing status can be shipped
	Existing status can be installed
	RMA installation note:
aka fua u	
otes from vendor file	Shipping note:
	Fig. 68D

Fig. 696
Fig. 696



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	-		2.00		Compaq SCSI HD		11/20/07		Hold				
	10/11/9/	1556-WX	28515		Critical	C	11/20/3/	Credit card	Note	lechdata	12345	Techdata 12345 Compaq	
	70,44,04	VW 1525	200.45		Compaq proliant	24	11/20/97		Refuse	<u>.</u>	7 2 2 0		
7	10/11/9/	1330-WA	CIC07		Track	4				lechdata	13554	13554 Compaq	
					Сотрад тетолу	Ç	11/19/97		stock				
ന	10/11/97	1556-WX	28515			2				Merisel		13554 Compaq	
		d	, , , , , , , , , , , , , , , , , , ,		HP Vectra		10,00		χO	lnaram			
4	10/11/9/	1444PA	28415				11/20/97	COD		Micro	13554	<del>}</del>	
	roj est os	0,777	20145		НР тетогу	7	11/21/97		Ж	3	40664	S	
ഹ	76/11/01	1444PA	CI <del>5</del> 07							Microage	13334	=	
·		Q.	00445		HP Printer	טטט	11/19/07		Ж	Computer		9	
۵.	10/11/9/	1444rA	C1+07		Drop Ship				Note	land	13334	È	
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* All items are	* All items are selectable and expand (double click) into item deails.	xpand (double	click) into i	tem deails.	* Replacement MWS = Red color	MWS = Re	od color						



1. Expected to receive will exclude refusal items.

Expected to ship will exclude refusal items, hold items and items with COD/cash term.
 Batch input for all packing slips and items. The system automatically match input with items that existing in the system to all items that received.

**FIG. 70** 

FIG. 70A	FIG. 70B	FIG. 70C
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Company - PO	MYSNum	Qty O	rd Revd
PACBELL ISG	M-930008 NoP	1	1 1
3 items 930107	1/7/93 Orio	Shipd 3	/22/93 3/22/93
3 DON BAKER PG.51	0-806-7459		TBD
LOCKED		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Jet Propulsion Laboratories			
2 items 000635262 1 Deborah Williams (9	1/5/93 Dest	Shipd	O Not Ordered R
LOCKED CONTROL TO THE PROPERTY OF THE PROPERTY	137-397-7184		Customer (66/66
PACBELL ISG	M-930008 NoP		OR ACLE
3 items 930107	1/7/93 Orig	***************	ORACLE
2 DON BAKER PG.51	0-806-7459		ORACLE
LOCKED		***************************************	SILICON GRAPHICS .
		1	Silicon Systems
930107	1/7/93	Shipd	Symantec Corporati
1	***************************************		Symantec Corporati
LOCKED			
BEEBOY FILE	M-930007 NoP	· • · · · · · · · · · · · · · · · · · ·	
5 MAUDELLE(41E) 7E	1/6/93 Orig	Shipd	
5 MAUDELLE(415) 75 LOCKED	-4020		is older than
	:		Customer
XXXXXXX	1/6/93	Shipd 3	(Priority √)
4		Silipu , 4	Descri
LOCKED	***************************************		
		1	
xxxxxx	1/6/93	Shipd	
3	***************************************		
LOCKED			
		į	
BEEBOY FILE	M-930007 NoP	1	
5 items XXXXXXX	****	Shipd 3	✓ = Special priority
2 MAUDELLE(415) 75	-4020		CMPLNQ
LOCKED	,======================================		
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**FIG. 70A** 

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	•••••••	2156		···········			*****	00%	0%	0%	<u> </u>
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			01130	<del></del>		***************************************	•	00%		0% 85%	<del></del>
)		1259	27LM			***************************************	•	00%	<del></del>	93%	**************************************
<u> </u>	<del></del>	1259	8450			4	+	25%		098	
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**FIG. 70C** 

Fig. 71

Fig.71A	Fig.71B	Fig.71C

PACBELL ISG						
3 items	Company — PO	MYSNum	Qty	Ord	Revd	Shipd
3 DON BAKER PO.510-806-7459 TBD  LOCKED  Jet Propulsion Laboratories M-930003 NoP 2 items 000635262 1/5/93 Dest 1 Deborah Williams (818) -397-7184 LOCKED  PACBELL ISG M-930008 NoP 3 items 930107 1/7/93 0-19 LOCKED  930107 1/7/93 UNION BANK OF CALIFORNIA UNION BANK OF CA	PACBELL ISG	M-930008 NoP	1	1	1	1
3 DON B AKER PG.510-806-7459  LOCKED  Jet Propulsion Laboratories M-930003 NoP 2 (items 000635262 1.75/93 Dest 1 Debor ah Williams (818) -397-7184 (DCKED  ACCED  Jetor ah Williams (818) -397-7184 (DCKED  Jetor ah Williams (818) -397-7184 (DINON B ANK OF CALIFORNIA UNION B ANK	3 items 930107	1/7/93 Orio	Shipd	3/22/93	3/22/9	3/22/
2 items 000635262	3 DON BAKER PG.51			***************************************		····
2 items 000635262	LOCKED				***************************************	*****************
Deborah Williams (818) -397-7184   LOCKED	Jet Propulsion Laboratories	M-930003 NoP				
Customer (13/13)(4)   PACBELL ISG	2 items 000635262					
PACBELL ISG	1 Deborah Williams (8	18) -397-7184	]   0	Not Orde	red Repor	t ON
PACEELL ISG	LOCKED		Cus	tomer (1	3/13)(4)	
3 items 930107 1/7/93 0iq 2 DON BAKER PG.510-B06-7459 LOCKED UNION BANK OF CALIFORNIA UNION B	PACBELL ISG	M-930008 NoP				A
2 DON BAKER PG.510-806-7459  LOCKED  930107 1/7/93 UNION BANK OF CALIFORNIA UNION BANK OF CALIF	3 items 930107		UNIC	N BANK OF	CALIFORNI	A
UNION BANK OF CALIFORNIA UNION BANK OF CALIFOR	2 DON BAKER PG.510	0-806-7459			·····	****************
930107 1/7/93  1 UNION BANK OF CALIFORNIA UNIO						
UNION BANK OF CALIFORNIA UNION BANK OF CALIFORNIA						
UNION BANK OF CALIFORNIA UNION BANK OF CALIFORNIA	930107	1/7/93	UNIC	N BANK OF	CALIFORNI	A
UNION B ANK OF CALIFORNIA    Sitems   XXXXXXX	<del></del>					
M-930007 NoP	LOCKED	***************************************				
Sitems   XXXXXXX	BEEBOY FILE	M-930007 NoP		N BANK OF	CALIFORNI	Α
5 MAUDELLE(415) 751-4020  LOCKED    Age On     s older than   days     Customer Notes     Priority ✓ Get MVS     Description     1 Gerry Binkhorst (408) 982-3350     LOCKED     EBBOY FILE   M-930007 Nop     3 Items XXXXXXX   1/6/93   Orig     2 MAUDELLE(415) 751-4020     LOCKED     Column   Locked     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Customer Notes     Priority ✓ Get MVS     Description     Customer Notes     Cust	***************************************					
LOCKED    Solder than   days						Ven On
XXXXXXX 1/6/93  4 LOCKED  Customer Notes  Priority ✓ Get MVS  Description  Description  1 Gerry Binkhorst (408) 982-3350 LOCKED  EEBOY FILE M-930007 NoP Sitems XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020 LOCKED						
XXXXXXX		:				
LOCKED    Control   Contr	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1 /6 /07	15 010			
Description   Description		176793				<u>)                                    </u>
UJITSU-ICL SYSTEMS, INC. M-930002 NoP items 11613 12/29/92 Orig 1 Gerry Binkhorst (408) 982-3350 LOCKED  BEBOY FILE M-930007 NoP items XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020 COCKED	LOCKED		Pr	iority √	_)	MWS
items 11613 12/29/92 Orig 1 Gerry Binkhorst (408) 982-3350 LOCKED  BEEBOY FILE M-930007 NoP 5 items XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020 LOCKED			<b> </b>	Des	scription	
items 11613 12/29/92 Orig 1 Gerry Binkhorst (408) 982-3350 LOCKED  BEEBOY FILE M-930007 NoP 5 items XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020 LOCKED						
items 11613 12/29/92 Orig 1 Gerry Binkhorst (408) 982-3350 LOCKED  BEEBOY FILE M-930007 NoP 5 items XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020 LOCKED			<b> </b>		•••••	
items 11613 12/29/92 Orig 1 Gerry Binkhorst (408) 982-3350 LOCKED  BEEBOY FILE M-930007 NoP 5 items XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020 LOCKED			11			
items 11613 12/29/92 Orig 1 Gerry Binkhorst (408) 982-3350 LOCKED  BEEBOY FILE M-930007 NoP 5 items XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020 LOCKED	ILLITEULICE SYSTEMS INC	M 070000 II -	}		••••••••••••••••••••••••	••••••
1 Gerry Binkhorst (408) 982-3350  LOCKED  BEEBOY FILE M-930007 NoP 5 items XXXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020  LOCKED	itoms 11617					
LOCKED  BEEBOY FILE M-930007 NoP  5 items XXXXXXX 1/6/93 Orig  2 MAUDELLE(415) 751-4020  LOCKED		112/29/92 Urig			***************************************	••••••
EEBOY FILE M-930007 NoP 5 items XXXXXXX 1/6/93 Orig 2 MAUDELLE(415) 751-4020  LOCKED		0) 782-3330	<u> </u>			_
2 MAUDELLE(415) 751-4020  LOCKED  CD 1111		14 07000				***************************************
2 MAUDELLE(415) 751-4020 LOCKED						
LOCKED C						
		- <del></del>				931033133131313131
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Sort Sets Searches Reti						
Sort Sets Searches Reti		_				
Sort Sets Searches Reti	c <u>s</u>	¬ ¬ (3	<b>)</b>   (6	<b>5)</b> ]		ĺ
Sort Sets Searches Ret		r <u>  2</u>				
	Sort	Sets (	Searches	<u> </u>		Reti
	•					17.6

**FIG. 71A** 

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		******************	••••••	•••••••		••••••	••••••	00
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110275			<del></del>			<del></del>		<del></del>
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••••••						*************	10	4
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**********************						0%	2	.Щ
10707	<u></u>	14	10	U%3 :	64%	42%	4	1
<u>D (4)</u>						Qty	Ord	Rc
						21	19	
				Cus	-Np	9	8	
	***************************************	*************	******	********	***************	1	1	
3500	:M97	<u>'-26139</u>	9	Cus	-рОК	15	15	
ven-Ctri (	/ PNo-	-M PN	D :	<u>Ord</u>	-Revd	F	20-Qty	- 4
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				••••••				••••••
				••••••				
	010275 010501 010517 010683 010807 010936 010904 010905 010907	010501 010517 010683 010807 010836 010904 010905 010907 014) MY M97 M93 5500 M97	010501 4 010517 13 010683 43 010683 43 010807 24 010936 10 010904 49 010905 5 010907 14 00(4) MYS 00(4) M97-2615 010905 M97-2613	010275       8       1         010501       4       7         010517       13       10         010683       43       8         010807       24       10         10936       10       10         10904       49       10         10905       5       10         10907       14       10         0 (4)       MYS         M97-26140       M97-26139         5500       M97-26139	10275   8   12%   10501   4   75%   10501   4   75%   100517   13   100%   10683   43   86%   10807   24   100%   10836   10   100%   10904   49   100%   10905   5   100%   10907   14   100%   10907   14   100%   10907   14   100%   10907   14   100%   10907   14   100%   10907   14   100%   10907   14   100%   10907   14   100%   10907   14   100%   10907   14   100%	10275   8   12%	10275   8   12%   12%   0%     10501   4   75%   25%   0%     10517   13   100%   76%   53%     10683   43   86%   86%   81%     10807   24   100%   95%   87%     10836   10   100%   10%   0%     10904   49   100%   61%   0%     10905   5   100%   20%   0%     10907   14   100%   64%   42%     10907   14   100%   64%   42%     10907   18   100%   64%   42%     10907   19   100%   64%   42%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     10907   100%   100%   100%     100%   100%   100%   100%     100%   100%   100%   100%     100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%     100%   100%   100%	10275   8   12%   12%   0%   63     10501   4   75%   25%   0%   42     10517   13   100%   76%   53%   43     10683   43   86%   86%   81%   21     10807   24   100%   95%   87%   10     10836   10   100%   10%   0%   2     10904   49   100%   61%   0%   2     10905   5   100%   20%   0%   2     10907   14   100%   64%   42%   4

**FIG. 71B** 

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xpedite Status – exp date – cust notes	CSR Notes	4
nore on future reports w	FHJFHJG	
W		
0/00/00	***************************************	
		==
rip Report Filters On	***************************************	
Customer Filter On		
At least		
Percent Filter On	***************************************	
Qty is or less		
Qty Filter On		
More than days old		
Age Filter On		İ
cyd Shpd	A	
18 <b>0</b>	***************************************	
4 0		
11 0 表り		
	***************************************	
A Expedite Status		
<b>米</b>		
<b>1</b>	· ·	
<u>                                </u>	***************************************	
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		<b> </b>
		1

**FIG. 71C** 

Fig. 72

Fig.72A	Fig.72B	Fig.72C

					Items
Company - PO	MYSNum	Qty	Ord	Revd	Shipd
PACBELL ISG	M-930008 NoP	1	1	1	1
3 items 930107	1/7/93 Orio	Shipd	3/22/93	3/22/93	3/22/93
3 DON BAKER PG.51	0-806-7459		***************************************	TBD	·· ^ · · · · · · · · · · · · · · · · ·
LOCKED		<del></del>			
Jet Propulsion Laboratories			i	1	1
2 items 000635262	1/5/93 Desi	Shipd	3/22/93		3/22/93
1 Deborah Williams (8 LOCKED	318) -397-7184		••••••	CmpLnd	HAYS-152
PACBELL ISG		<del></del>			
	M-930008 NoP		<b>i</b>	1	1
3 items 930107	1/7/93 Orig	Shipd	3/22/93	3/22/93	3/22/93
2 DON BAKER PG.51 LOCKED	0-806-7459		***************************************	CmpLnd	HPCD-1622
LOCKED		-		<del></del>	
970107		1		1	1
930107	1/7/93	Shipd	3/22/93	3/22/93	3/22/93
LOCKED	***************************************	<u></u>	••••••	CmpLnd	HPCD-E44
BEEBUY FILE	M-930007 N₀P	1	1	1	1
items XXXXXXX	1/6/93 Orig	Shipd	3/22/93	3/22/93	3/22/93
5 MAUDELLE(415) 75	1-4020		*******************	CmpLnd	APPL-1034
LOCKED					
**************************************		1	*******************	1	1
XXXXXXX	1/6/93	Shipd	3/22/93	3/22/93	3/22/93
LOCKED				CmpLnd	APPL-H14
COOKED		<del></del>			
XXXXXXX	4 / 6 / 6 7	1	**********	1	1
3	1/6/93	Shipd	3/22/93	3/22/93	3/22/93
LOCKED	***************************************		***************************************	CmpLnd	APPL-H14
UJITSU-ICL SYSTEMS, INC.	M-970002 N-P				-
items 11613	12/29/92 O-i-	1	l	7 (00 (0-	1
1 Gerry Binkhorst (40	12/29/92 Orig	301pg	6/3/93	3/22/93	^
LOCKED	30) 362-3330	4444		MicroD	307535
EEBOY FILE	M-930007 NoP	1	1		
items XXXXXXX	**********************************		7/22/07	7 /00 /07	1
2 MAUDELLE(415) 751	1/6/93 Orig	Snipa	3/22/93	3/22/93	3/22/93
LOCKED		<b>!</b>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CmpLnd	APPL-A08
		1	1	1	
<b>5</b> 4					
	ר 🚅 🧐		23		
1					
Sort	Sets Se	arches	]		Return

**FIG. 72A** 

Descr	ription	Cost	Price
CABLE			
	***************************************	<u>.</u>	8.00
ULTRA	144, 14400BPS, EXT, V32 BIS	:	
) [3	3336		595.00
	3336	08-00	/13
DOCTO	COURT I FUEL WALLETON OF THE	1	
	CRIPT LEVEL II CARTRIDGE F/LJ	:	450.00
IIIP, II			450.00
	3338	C20897	
SERIA	Select a status		
)	Jane Caracasiii		
	Status		
MAC		<del></del>	
RCHR	Cancelled		
	Credit hold		
	Direct ship from Mnfctr Discontinued		
	Drop shipped		
RECH	Hand Divr		
SYST	Ignore on future reports		
6	In Transit		ļ
	Installation		
	Lost in transit		
	No record of order		
	Not released new product		
	On allocation		
	Open source complete		
QEMN	Open source required		
	Order hold		1
	Other		
	Partial ship		
20) (5	Replacement		
POYE	Ship to wrong address		
33MH	Shipped		
3	Urgent		
	Vendor follow up		
	Wrong Product		-
3	L		
			<del></del>
Rela	Cancel	OK	- 11

**FIG. 72B** 

xpedite Status – exp date – cust notes	CSR Notes
nore on future reports	FHJFHJG
/00/00	***************************************
ck order	
/00/00	
Transit	
/00/00	
ore on future reports	
ore on future reports	
/00 /00 TEODT	***************************************
/00/00 TESRT	<del></del>
ore on future reports	
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ore on future reports	
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ore on future reports	
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ore on future reports	
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ore on future reports	
	:

**FIG. 72C** 

Fig. 73

Fig.73A	Fig.73B	Fig.73C

			170	/437		
RMA- Orig-	Pr	Case No		ExCr-RCred	Ven-RMA*	Ship-Rev
R-265798RP		Temp2456	3-1	NoCredit	compaq	NA!
Nemesio.c	cc	5/6/97			97050607801	NA!
					Warranty repa	ir
		5/14/97 C	5/06	/97 DOA PRO	DUCT : PROVIDIA	AN (drop shij
R-265876RP		Temp2478	14-1	5,996.70 *	Microage	5/12/97
Brandon.a	aa	5/6/97		5,996.70	716376	NA!
					Credit	
		5/7/97: u	nder I	1WS#24784,	740cdt is transi	ferred from
R-265914		Temp2483	3-1	8,449.00	Merisel	5/9/97
Brandon.a	aa	5/8/97		8,449.00	4984009	NA!
					Credit	
		5/8/97 TH	E CUS	STOMER CANCE	LED THE ORDER	, WE ARE G
R-266068		Temp2483	3-2	759.00	Merisel	5/9/97
Brandon.a	aa	5/8/97		759.00	(4984009	NA!
					Credit	
		5/8/97 TH	E CUS	STOMER CANCE	LED THE ORDER	, WE ARE G
R-266177		Temp2483	3-3	13,524.00 *	Merisel	5/9/97
Brandon.a	aa	5/8/97		13,524.00	4984009)	NA!
					Credit	
		vendor par	t <b>#</b> 57	1 <b>56</b> . 5/ <b>8/</b> 97	THE CUSTOMER	CANCELED T
R-266295		Temp2483	3-5	69.50	Merisel	5/9/97
Brandon.a	aa	5/8/97		69.50	4984009*	NA!
					Credit	
5/8/97 THE CUSTOMER CANCELED THE ORDER, WE ARE GI						
R-266374		Temp2483	3-7	2,508.00	Merisel	5/9/97
Brandon.a	aa	5/8/97	· · · <u>· · · ·</u>	2,508.00	*4984009	NA!
		or inv	A A	1 2 Sets 5	Gearches Ne	+ w Records
<u>কা</u>	-					

**FIG. 73A** 

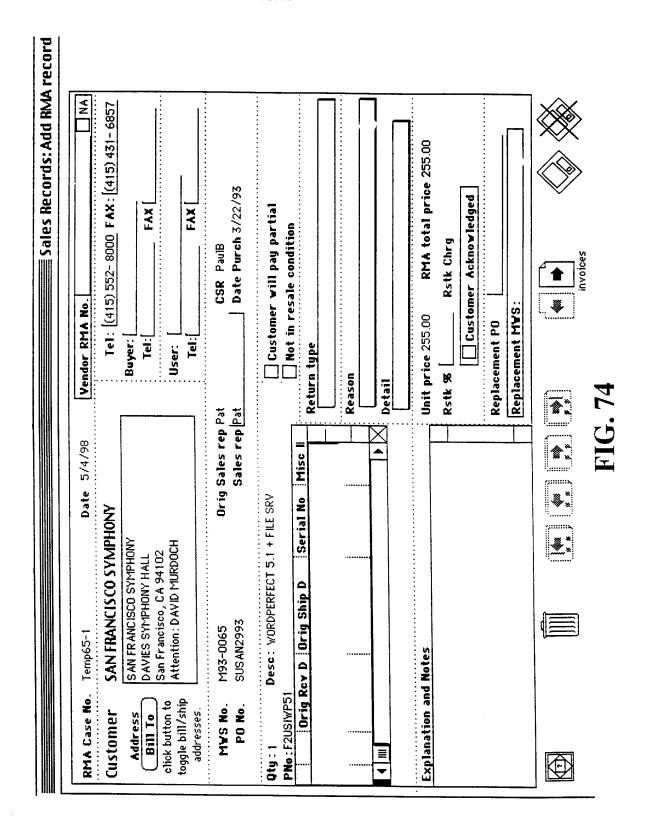
171/437							
RMR: 7 of 3186 (Sales-MW€							
Cust-Cust PO®-Faxed	Rcy-Shp	Inv-Crd	Qty	Description			
FIRST DEPOSIT	NA!	13143	1	ARMADA 4131T 5/133 16			
19497-40167-N	NA!	3,628	0	NB 41 00			
Dispatched On-Site warran	ty service	No Credit		DOA			
to compaq)IS TRYING TO G	ET IT REPA	IRED THROU	GH COI	MPAQ. COMPAQ WILL REPA			
NETWORK GENERAL CORI		13381	1	TECRA 740CDT PENT-166			
<b>8</b> 6091	5/12/97	6,195	1	13.3 TFT 10X			
Warranty repair/exchange		No Credit		DOA			
inv#233828, the item is DOA, we will replace with inventory item (also from micro							
MEDIATEL ( TODD MART X	NA!		1	NETSERVER LH2 6/200 M1			
SF970225	NA!	27,805	0				
Not shipped to customer		No Credit					
JING TO RETURN AS WRONG	PRODUCT R	ECEIVED .					
MEDAIATEL (TODD MAR 🖂	NA!		1	64MB MEM. EXP. MODULE F			
SF970225	NA!	NC	0				
No credit/no exchange		No Credit					
ING TO RETURN AS WRONG	PRODUCT R	ECEIVED .					
MEDIATEL (TODD MARTIX	NA!		6	HOT SWAP DRIVE, 9.0GB,F			
SF970225	NA!	NC	0				
No credit/no exchange		No Credit					
HE ORDER , WE ARE GOING T	O RETURN A	AS WRONG P	RODUC	CT RECEIVED .			
MEDIATEL (TODDD M AR 🖂	NA!			ETHEREXPRESS 10/100 PC			
SF970225	NA!	NC	0	В			
No credit/no exchange		No Credit					
DING TO RETURN AS WRONG PRODUCT RECEIVED .							
MEDIATEL 🖂	NA!		1	SURESTORE 12000E AUTOL			
SF970225	NA!	NC	0	SCSI 4MM DDS-2 W/MANI			
,							
	1	┛╎	Appr	ove Reset			
Return RelatedSwite	ch QuickS	witch (No	ot app	roved Not Required			

**FIG. 73B** 

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Repl MWS	ادا <u>****</u>
MB 1400 12.1 IN CTFT	
Reqd Released  Hardware - Other Closed	
R. COMPAQ CASE# IS 97050607801 KYBC	
MMX 2.02GB 16MB ☐ Reqd ☑ Released	
Hardware - Other Closed	
ge s/n#03720765, which already passed 30	
64MB RAM	
Reqd Released	
Closed	
VNETSERVER 60NS	
Reqd Released	
Closed	
R NETSERVER	
Reqd Released	
Closed	
·	
TX ENET MODEL	
Reqd Released	
Closed	
DADER EXT 48GB	
AL,CABLE Regd Released	
	_
Close Royd CM Royd VCM Release MVS	)
Cancel Create CM Create VCM Set NAs/Cred	
	14/15

**FIG. 73C** 

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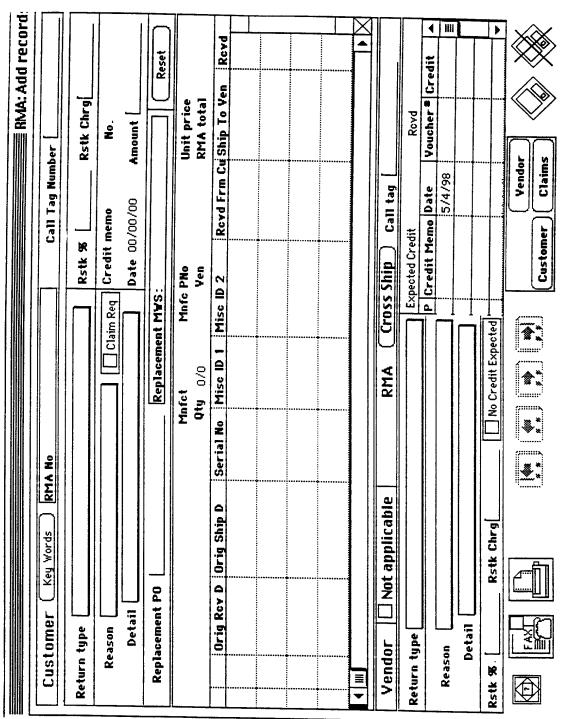


FIG. 75

Fig. 76A
Fig. 76B

Repl MASS

Show

E-mail notification

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2. Exchange Mirror C & V

	V = Vendor whom we hought from or mfr of product	rom or	£ 4	ų	product
	C = Customer	*	1	5	3
Spectrum of N	NA				

1. If rece	<ol> <li>If received, ship, claim &amp; credit = NA, then return type must be equal to Not Applicable.</li> </ol>	& credit	= NA, the	n return ty	pe must l	oe equal to l	Not Applicab	- - -							
Return	Return type/Action	Active	Repair/   replace	Service \$ On-site On-site	S On-site			Mfr. or vendor	PWA#	Rec'd	Shi	Cradit	Claim	Cust.Orig.	Fax return
	(C&V)	3	part #	N/V	Charge	repar Charge	Drop Ship	Orop Ship Cross Ship		٧	۷ ۷	<u> </u>	γ	V req'd	
1. Credit	. Credit I Check	>- >-	N/A N/A	N/A N/A	N/A N/A	N/A N/A	NA NA	NA NA		N/A	NA		N/A N/A	N/A Y	
÷	Credit card	> <del>-</del> >-	N/A N/A	N/A N/A	N/A N/A		NA NA	NA NA		N/A	NA		N AN	NA Y	>- >-
	Credit memo	<b>&gt; &gt;</b>	N'A N'A	N/A N/A N/A N/A N/A N/A	N/A N/A	N/A N/A	N AN	N A A		N/A	NA		N K	N/A	>- >-

3.Repair/replace (on/off site)

FIG.76A

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	:	:					
> 0	> 0	<b>&gt;</b> 0	> 0	> U	> 0	> 0	> 0
Z	z	>	>-	z	Z	Υ.	>-
> >	<b>&gt;</b> >	>>	>- >-	N/A N/A	N N	N N	N N
>- >-	<b>&gt;</b> >	<b>&gt;</b> >	<b>&gt;-</b> >-	N/A N/A	NA NA	N/A N/A	>->-
>- >-	N N	<b>&gt;</b> >	N/A N/A	> >	N/A N/A	N/A N/A	>- >-
N/A Y	N/A Y	N/A Y	N/A Y	N/A Y	N/A Y	N/A ≻	ΝΆ Υ
N/A N/A	N N	N'A N'A	N/A N/A	N/A N/A	N/A N/A		
NA	₹ ¥	N N'A	NA NA	N/A N/A		NA	
	N'A N'A	NA	N/A N/A	N/A	N/A	N/A N/A	
	N N	NA	N/A N/A	N/A	N/A	N'A N'A	
	N/A	W	N/A			N/A N/A	
X, X,	N'A N'A	N. X.	N/A N/A	N/A N/A	N/A N/A	N.Y.	N, N,
N N	NA NA	<b>₹</b> ₹	N/A N/A	N. A.	N/A N/A	<u>~</u>	N, N,
N/A N/A	N/A N/A	N/X	N Y.N	N/A N/A	N/A N/A	N/A N/A	N/A N/A
<b>₹</b>	<b>X X</b>	<b>₹</b> ₹	N/Y	N/A N/A	N/A N/A	N N N'A	N'A N'A
<b>₹</b>	<b>X</b> X	<b>X X</b>	N.Y.	N/A N/A	N'A N'A	NA NA	N/A N/A
N K	<b>X</b> X	<b>₹</b>	N AW	N/A N/A	N'A N'A	NA NA	N/A N/A
>->-	> >	<b>&gt;</b> >	<del>}</del> }	>->-	>->-	>- >-	>->-
Under warranty part/exchange required	Under warranty part not req'd	Out of warranty part required	Out of warranty part not req'd	4. Ship Iwrong address	Refused	Lost	Ship damaged
Mirror C & V				4. Ship			

FIG.76B

178/437

				:	:	r	
> O	>0	> 0	> U	> U	> 0	> 0	> O
<b>&gt;</b>	Z	Z	z	z	Z	Z	
₹ §	N N	N/A N/A	N/A N/A	NA NA	N'A N'A	N/A N/A	\ \
N N N	>- >-	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	<b>*</b> *
N N	>- >-	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	<del>}</del>
N/A Y	N/A Y	N/A N	N/A N	N'A N	N N	N/A N	N/A N/A
N N	N N N A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	
N N		NA		N/A N/A	NA	N/A N/A	
N.	N/A	N/A	N/A	NA NA	N/A	N/A N/A	
N N	N	N/A N/A	N/A N/A	N'A N'A	N/A N/A	N/A N/A	
N N				N/A		N/A N/A	
X X	N/A N/A	N/A N/A	NA NA	NA NA	N/A N/A	N/A N/A	Y.N Y.N
<b>N N</b>	N K	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	YN
₹ ₹	N N N	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Y.N Y.N
W W.	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	YN YN
N X	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Y.N.
N N	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	NN YN
<b>&gt;-</b> >-	<b>&gt;</b> >-	\ \	λ .	>- >-	<del>&gt;-</del> >-	<b>&gt;</b> >	> >-
missing components	Duplicate ship	l I Inventory	Cancel order/shipment		Never ship to customer	Not applicable	
			5. Never		house	6. Not a	7. Other

# FIG.76C

Fig. 77A
Fig. 77A

Limit File (Customer or Vendor)

Auotmatic Approval Intelligence

			180/437			
		Charge Service fee	N/A	N/A	N/A	N/A N/A
	mer	exceed Sprice limit	Z	Z	N/A	z z
	Customer	Charge Restock fee	Z	Z	N/A	<b>z</b> >-
		Exceed Customer Allow time duration	Z	Z	N/A	2
Groups	lor	Vendor Restock Fee	N/A	N/A	N/A	NA NA
	Vendor	Exceed Vendor allow max.time Duration	N	Z	. N/A	22
		Exceed Mfr. allow max Time Duration	Z	<b>&gt;</b> -	N/A	zz
	Mfr.	Mfr. allow Open Box	>-	Z	N/A	ZZ
		Mfr. Allow Return	>-	λ	2	<b>&gt;</b> -
		Allow auto Approval	>-	>-	2	>- >-
		Return type/Action (C & V)	I. Credit I Check	Credit card	Credit memo	2. Exchange Miror C & V
		Retu	1. Cred			2. Excl

# SUBSTITUTE SHEET (RULE 26)

! -				181/4	37				1
		Z	>-	λ	<del>/</del>	N/A	NA	N/A	
		N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		NA	N/A N/A	N/A N/A	N/A N/A	N/A	N/A	N/A	
		N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		N/A	N/A	N/A	N/A		N/A	N/A	-
		N/A	N/A	N/A	N/A	Z	Z	Z	- 1       
		Z	Z	Z	Z	N/A	N/A	N/A	
		N/A	NA	N/A	N/A				
		N/A	N/A	N/A	N/A		N/A		
			>-	>-	Y	Т			
	3.Repair/replace (on/off site)	Mirror Under warranty C & V part/exchange required	Under warranty part not req'd	Out of warranty part required	Out of warranty part not req'd		Refused		
	3.Repair/repla (on/off site)	Mirror C & V				4. Ship			_

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<u> </u>		•	18:	2/437				
		NA	N/A	N/A	NA	NA	N/A	
NA			N/A	N/A	N/A	N/A	N/A	
N/A	ΝΑ	Å	N/A	N/A	N/A	N/A	N/A	
Z	Z	N/A	N/A	N/A	N/A	N/A	N/A	
N/A	NA	N/A	N/A	N/A	N/A	N/A	N/A	
Z	NA	N/A N	N	Z	Z	Z	N	
Z	Z	λ-	N/A	N/A	NA	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	, ,,,,
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
γ	λ	>-	٨	٨	>-	<b>&gt;</b>	Y	
l Ship I damaged	missing components	Duplicate ship	Inventory	Cancel order/shipment	ship, Transferred stay in Transferred ware- I order	l Never ship to customer	6. Not applicable	
		<del></del>		5. Never	ship, stay in ware-	l house	6. Not s	7. Other

SUBSTITUTE SHEET (RULE 26)

Fig. 78A

Customer File Auto RIMA Approval Automatic Approval Criteria

f			/437			
Excced agreed return period			Days	Days	Days	N/A
Exced \$ return limit	Amount	Amount	Amount	Amount	Amount	N/A
Service fee for On-site	Range/Y/N	Вапде/УЛИ	RangeMM	Range/Y/N	Range/Y/N	Range/Y/N
S price тах	Range		Range	Range	N/A	N/A
Max allow time = Vendor max time	N/A			N/A	N/A	N/A
Restock Fee	Range	Range	Range	Range	Range	N/A
Preset time allow between Orig. ship date & RMA request date		Range	Range	Range	Range	N/A
Return type/Action (C & V)	1. Credit l Check	Credit card	l Credit I memo	2. Exchange Mirror C & V	3.Repair/replace (on/off site)	Mirror Under warranty C & V <sub>1</sub> part/exchange

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		-		185/	+37	: :	:		!
	N/A	ΝΑ		N/A	ΝA	N/A	•	•	NA
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
				NA	N/A			N/A	N/A
	N/A		N/A	N/A	N/A		N/A	N/A	N/A
			ΝΆ	N/A	N/A	NA	N/A	N/A	NA
	NA	N/A	N/A	N/A	N/A	N/A	-	NA	N/A
		N/A	N/A	N/A	N/A	Range	Range	Range	Range
l required	Under warranty part not req'd	Out of warranty part required	Out of warranty part not req'd	4. Ship wrong address	Refused	Lost	Ship damaged	missing components	l Duplicate

C
$\infty$
1
G
正

5. Cancel N/A N/A N/A N/A N/A N/A N/A N/A N/A Stay in Translerred N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	— - 	gişs								<b>.</b>
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A		Inventory	N/A	NA	N/A	N/A	NA	N/A	N/A	
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	- I	Cancel order/shipment	N/A	N/A	N/A		N/A	N/A	N/A	
N/A N/A N/A N/A N/A N/A N/A	a a in in in	Transferred order	N/A	N/A	N/A	NA	N/A N/A N/A	N/A	NA	186/4
N/A N/A	use 1	Never ship to customer	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37
	Not a	oplicable	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7. Other	Other									

# New rules:

- 1. Return type must be create in duplicate (pair) for Vendor & Customer (V & C).
- 2. Allow changes only of return detail on either V or C. One return detail must remain unchanged (creation keys).
  - 3. Return type can be different for vendor & customer on the same RMA.
- Option to block use of any return type.
   Original ship date as guide for proper selection of return type.
   Create default setup initially.

Fig. 79

Fig. 79A

Fig. 79B

WO 99/33016 PCT/US98/27496

188/437 <u>Vendor File Auto RMA Approval</u> Automatic Approval Criteria

	type/Action	Return allowed	Allowable Max date vendor time	Restock Fee
1. Credit	Check	Y/N	Limit	Range
	Credit card	Y/N	Limit	Range
	Credit memo	Y/N	Limit	Range
2. Excha Mirror	nge C & V	Y/N	Limit	Range
3.Repair/i (on/off s	ite)	Y/N	N/A	N/A
Mirror L C & V I I	Inder warranty part/exchange required	Y/N	N/A	N/A
	Inder warranty part not req'd	Y/N	N/A	N/A
I (	Out of warranty part required	Y/N	N/A	N/A
1	Out of warranty part not req'd	Y/N	N/A	N/A
4. Ship v	vrong address	Y/N	Limit	Range
1	Refused	Y/N	Limit	Range
1	Lost	Y/N	N/A	N/A
	Ship damaged	Y/N	Limit	Limit

FIG.79A

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	missing components	Y/N	N/A	N/A
	Duplicate ship	Y/N	N/A	N/A
·	Inventory	Y/N	N/A	N/A
5. Never	Cancel order/shipment	Y/N	N/A	N/A
ship, stay in ware-	Transferred order	Y/N	N/A	N/A
house	Never ship to customer	Y/N	Limit	Limit
6. Not	applicable	Y/N	N/A	N/A
7. Othe	Pr			

#### New rules:

- 1. Return type must be create in duplicate (pair) for Vendor & Customer (V & C).
- 2. Allow changes only of return detail on either V or C. One return detail must remain unchanged (crea
- 3. Return type can be different for vendor & customer on the same RMA.
- 4. Option to block use of any return type.
- 5. Original ship date as guide for proper selection of return type.
- 6. Create default setup initially.

FIG.79B

Fig. 80

Fig. 80A

Fig. 80B

191/437 Mfr. File Auto RMA Approval Automatic Approval Criteria

	type/Action C & V)	Return allowed	Open return allowed	Max time to return	Max time to Warranty service on-site	Max time to Warranty service off-site
1. Credit	Check	Υ	Y/N	Limit	N/A	N/A
	Credit card	Y	Y/N	Limit	N/A	N/A
	Credit memo	Y	Y/N	Limit	N/A	N/A
2. Excha Mirror	inge C & V	Υ	Y/N	Limit	N/A	N/A
3.Repair/i		Υ		Limit	N/A	N/A
Mirror U	Jnder warranty part/exchange required	Υ	N/A	N/A	Limit	Limit
	Inder warranty part not req'd	Υ	N/A	N/A	Limit	Limit
I ( I	Out of warranty part required	Υ	N/A	N/A	N/A	N/A
( ) ( )	Out of warranty part not req'd	Υ	N/A	N/A	N/A	N/A
4. Ship	wrong address	Υ	N/A	Limit	N/A	N/A
1	Refused	Y	N/A	Limit	N/A	N/A
1	Lost	Υ	N/A	Limit	N/A	N/A
	Ship damaged	Υ	N/A	Limit	N/A	N/A

FIG.80A

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	missing components	Υ.	N/A	N/A	N/A	N/A
	Duplicate ship	Υ	N/A	Limit	N/A	N/A
	Inventory	Υ	N/A	Limit	N/A	N/A
5. <b>Never</b>	Cancel order/shipment	Y	N/A	Limit	N/A	N/A
ship, stay in ware-	Transferred order	Υ	N/A	N/A	N/A	N/A
house	Never ship to customer	Υ	N/A	Limit	N/A	N/A
6. Not	applicable	Υ	N/A	Limit	N/A	N/A
7. Othe	er	Υ	N/A	Limit	N/A	N/A

### New rules:

- 1. Return type must be create in duplicate (pair) for Vendor & Customer (V & C).
- 2. Allow changes only of return detail on either V or C. One return detail must remain unchanged (creation keys
- 3. Return type can be different for vendor & customer on the same RMA.
- 4. Option to block use of any return type.
- 5. Original ship date as guide for proper selection of return type.
- 6. Create default setup initially.

# FIG.80B

your return request(s) have been approved.

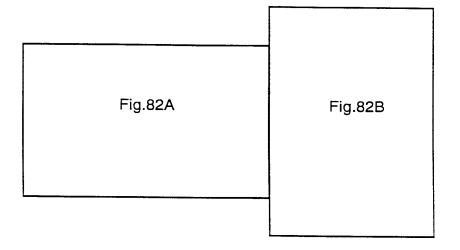
R-232421 is your RMA number.

Please remember to check replacement option when you are ready to submit your replacement order. If you want to exchange for a new product, please click Products below.

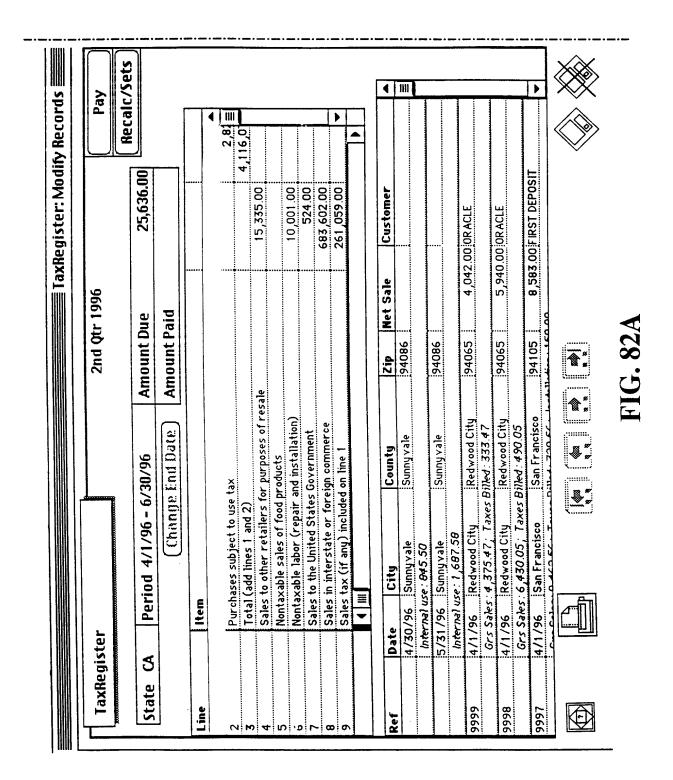
Please use the following links if you wish to leave the current screen and move on. Otf Log Tracking Returns/Repair Products

FIG. 81

Fig. 82



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SUBSTITUTE SHEET (RULE 26)

```
FORMULA OR FIELDS TO USE IN QUICK REPORT OF SALES TAX FILE
              LINE
 Line 1(Col4): GrossSale - PriceCredit
  Line 2(Col4):_____InternalUse
 Line 3(Col4):_____Line1(Col4) + Line2(Col4)
 Line 4(Col3):_____ Resale+ResaleAdjust
 Line 5(Col3): FoodProducts + FoodAdjust
Line 6(Col3): Installation
Line 7(Col3): GovernmentSale + GovernmentAdjus
Line 8(Col3): OutOfState + OutOfStateAdj
 Line 9(Col3):_____SalesTaxBilled
 Line 10a(Col3):_____BadDebt
 Line 10b(Col3):_____ResoldIntUse
 Line 10c(Col3): ReturnedItems
                      _____ Discounts
 Line 10d(Co13):___
 Line 10e box 60(Col3):___ not calculated
 Line 10e 61(Col3):_____Line 10e box 60(Col3)*0.8333
Line 10f(Col3):_____Freight
 Line 11(Col4):______ Sum of Line4(Col3) thru Line10f(Col3)
Line 12(Col4):_____ Line3(Col4) - Line11(Col4)
 Line 13(Co14): Line12(Co14) * 0.06
Line 14a(Co14): Line10e 61(Co13) + Line12(Co14)
Line 14b(Co14): Line14a 61(Co14) * 0.0025
Line 15(Co15): Not calculated
 Line 16(Col4):_____Line14a(Col4) + Line15(Col4)
Line 17(Col4):____Line16(Col4) * 0.01
Line 18(Co14):______ CountyTax (Register gets amount from sum of Co18)
Line 19(Co14):_____ Line13(Co14) + Line 14b(Co14) + Line 17(Co14) + Line 18(Co14)
Line 20a(Col4): OutOfStatTxPaid
 Line 20b(Col3): _____ County Taxable Tt
Line 20b(Co14):______Line 20a(Co13) * 0.0075
Line 20c(Col3):_____ CountyTaxableTt
Line 20c(Col4):____ Line 20c(Col3) * 0.0075
Line 21(Col4):_____Line 19(Col4) - Line20a(Col4) - Line20b(Col4) - Line20ca
 Line 22(Co13):_____ Actual prepayment from 1st prepayment register.
Line 23(Col3): Actual prepayment from 1st prepayment register.

Line 23(Col3): Actual prepayment from 2nd prepayment register.

Line 23(Col4): Line22(Col3) + Line23(Col3)

Line 24(Col4): Not calculated
Line 25(Col4):_____ Not calculated
Line 26(Co14): Line23(Co14) + Line24(Co14) + Line25(Co14)
                 Schedule A
Line A1(Col4):_____Line16(Col4)
Line A2/A3(Col4):_____GrossSale+InternalUse
Line A4(Col4):_____Line A1(Col4) - Line A2/A3(Col4)
Counties(Col3):_____CountyTaxableTt
 Counties(Co16): Counties(Co13)
 Counties(Col7):_____Tax Table
 Counties(Co18): _____ CountyTax (Register gets from Counties(Co16) * Counties(Co17))
                                                                                                                  111
```

**FIG. 82B** 

Fig. 83

Fig.83A	Fig.83B	Fig.83C

Invoice-Date-T	erm-Tune	Customes			
13195	crin rype	ORACLE		¥ Custome	r PO
	N30	C. RODRIGUEZ	• • • • • • • • • • • • • • • • • • • •	(415) 506-320	
i .		(415) 633-294			 8078
Printed				mp24620-1) App	
13204		FIRST DEPOS		.,.,,	
3/26/97	N30			(415) 222-766	59
	DS	(415) 278-604		19620-439	
Printed	STxPaid	AR Posted R-	263681RP (Te	mp24646-1) App	roved
13231	• • • • • • • • • • • • • • • • • • • •	APPLIED MAT			
3/31/97	N30	Denise Fritsch		(408) 563-124	Ю
Customer		(408) 563-550	4	450002	0574
Printed	ST×Paid			iny. list to denise	. 5/6
13261		CHEVRON INFO	RMATION T	ECHNOLOGY	
4/3/97	N/30	Melane Nock-Sal	gado	510) 842-0710	)
Customer		510) 328-1710	******************************	FSRA 200	6326
Printed	STxPaid	~~~~	364144KP (1e)	mp24618-3) Clos	ed:6/
1 <b>3300</b> 4/9/97		Gasonics Inte			
<b>&gt; · · · · · · · · · · · · · · · · · · ·</b>	N30	Dana Sengeush		(408) 570-736	
Customer Printed	ST×Paid	(408) 570-7350		3	1646
13307	SIXFAID			emp24712-1) Ap	prove
	N30	NETWORK GEN			
Customer		(415) 327-3961	• • • • • • • • • • • • • • • • • • • •	(415) 473-206	
Printed	STxPaid	(410) 327-3361		8	6035
13359		APPLIED MAT	EDIALC		
4/17/97	N30			(408) 567-124	
Replacement		(408) 563-5504	· • • • • • • • • • • • • • • • • • • •	408) 563-124 450002	
Printed	STxPaid			emp24625-1)	
Option	c BA				(
	لي ك			<b>(</b>	
FastDs	ply Sort	Sets	Search	New Records	Ret
<b>4</b> IIII					

# **FIG. 83A**

MYS /qty- Total PO- in		Left to pay	Age	Frt-Tx-RM
M97-24620 238078		Closed-Paid	Age : 65	89.43
1,634.43 1,634.4			J	Out of state
P: 1,634.43 L: 5/28/97 4/11/97	V: PAIC	IN FULL	*******************	
				<del></del>
M97-24646 19620-4	3935-N	Closed-Paid	Age : 36	Destination
469.81 469.81	• • • • • • • • • • • • • • • • • • • •		<u> </u>	36.81
P: 469.81 L: 5/1/97 V	PAID IN	FULL	•••••••••	<u> </u>
4/15/97				
<b>M97-24625</b> 4500020		Closed-Paid	Age : 70	42.16
6,228.09				444.93
P:6,228.09 L:6/9/97			***************************************	
/97: donna, not on sys yet, n	eeds denise	. 5/5/97: shipp	ped to gene	lane, talked to
197-24618 FSRA 200	06326	Open	Age: 379	1,569.79
244,363	.72	. 1		18,503.93
2: 244,363.72 L: 4/18/97	7 V: P/	AID IN FULL		
5/_7_R-263925RP (Temp246			15/97: Jin	Walsh 510-8
<b>197-24712</b> 31646		Closed-Paid		
84.42 184.42				,
P: 184.42 L: 6/6/97 V:	PAID IN I	FULL		
:4/17/97 5/29/97:RMA			pe, need to	credit \$10 14
197-24713 86035		Closed-Paid		
304.72 304.71	***********	•	1	22.31
P: 304.71 L: 5/5/97 V:	PAID IN		······	22.51
				***************************************
<b>197-24760</b> 4500020	574	Closed-Paid	Λ E.C	70.11
,551.71 4,551.71		Closed I ald	Age : 56	
P: 4,551.71 L: 6/12/97		.i	A	344.60
: donna will CM-13231-1-73	\$4500.72	inv\$4551.71 +-		
	V.000.12	:	:	my and pay th
ा विष्	_ [		70	
りむり起		Total & Collect	Note	SDe-
TD PolatodSwitch Outst	- -	Searc	hes	P
rn RelatedSwitch QuickS	Switch L	Jedic	1163	

**FIG. 83B** 

edit summary				
				<del></del>
***************************************	***************************************			
				•••••••••••••••••••••••••••••••••••••••
	***************************************	***************************************	*************************	
- · ·				
***************************************		•••••		*************************
		····		
i3 -> Stacia Goldste	in 510-842-2660,	left msg.	4/11/97	': ←mail ı
ī3 -> Stacia Goldste	in 510-842-2660,	left msg.	4/11/97	':e-mail i
i3 -> Stacia Goldste	in 510-842-2660,	left msg.	4/11/97	': e-mail t
	in 510-842-2660,	left msg.	4/11/97	':e-mail ı
i3 -> Stacia Goldste Sourtis' fault.	in 510-842-2660,	left msg.	4/11/97	'∶e-mail i
	-	left msg.	4/11/97	'∶e-mail i
	in 510-842-2660,	left msg.	4/11/97	?: e-mail 1
	-	left msg.	4/11/97	': ←mail i
	-	left msg.	4/11/97	': ←mail i
	-	left msg.	4/11/97	'∶e-mail i
	-	left msg.	4/11/97	'∶e-mail i
s curtis ' fault.				
s curtis ' fault.				
s curtis ' fault.				
s ourtis' fault.	-263744XSM / Tei			

**FIG. 83C** 

Fig. 84

Fig.84A	Fig.84B	Fig.84C

# · 202/437

voice-Date-Term-Type	Customer	¥ Customer F
0840	SILICON GRAPHICS	INC
6/22/96 N30	ACCOUNTS PAYABLE	(415)933-6381
Customer	(415)961-1351	01C10148
Printed	R-250572	RP (Temp22590-1) Approx
0843	FIRST DEPOSIT	
6/22/96 N30	LINDA	(415) 222-7669
Customer	(415) 278-6045	16790-32726-210
Printed		
)844	ORACLE	
6/22/96 N45	C. RODRIGUEZ	(415) 506-3209
Customer	(415) 633-2945	2091
Printed	•	2031
***************************************		
·····		
	•	
		******************************
		••••••
		***************************************
•••		
	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •
	•	*****
<u> </u>		
A CRA		
Options G		
TAD1		
FastDsply Sort	Sets Search	New Records

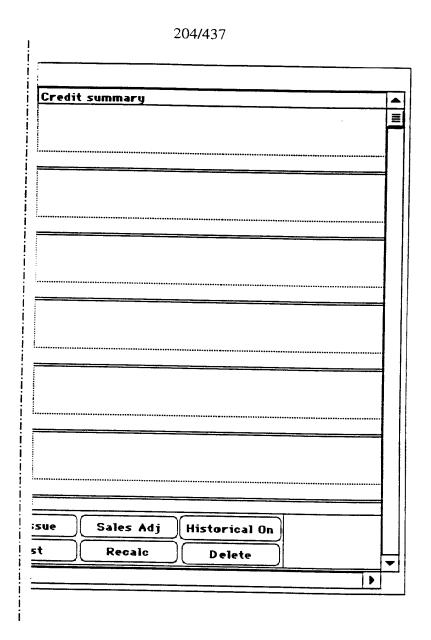
**FIG. 84A** 

203/437

M¥5 /qty- lotaijru-	INAOICEG	Lett to pay	Age	Frt-	Tx-RMA
<b>M96-22590</b> 01C1		Closed-Paid	Age: 46	ORIG	No Frt
4,794.88 367.				26.4	3
P:367.43 L:8/7/96	V: PAIDIN			·	
Totals (3 invoices	0 credits)				nation 38
	1			$\mathbf{H}$	
Total Credits				Н	
Net Invoiced	4,261.52				f state
Total sales	3,923.00				
Total Tax Total Installation	245.31 50.00				
Total Freight	43.21				
Paid to date Credits taken to date	4,261.52	·			
Net received	4,261.52				
Not paid Credits not taken		3-7			
Net receivable	— + = = = =				•••••
By Customer #C	Don		Show		De-I
rn RelatedSwitch Qu	JickSwitch L	Jeure	пез		Po

**FIG. 84B** 

WO 99/33016 PCT/US98/27496



**FIG. 84C** 

Fig. 85

Fig.85A	Fig.85B	Fig.85C

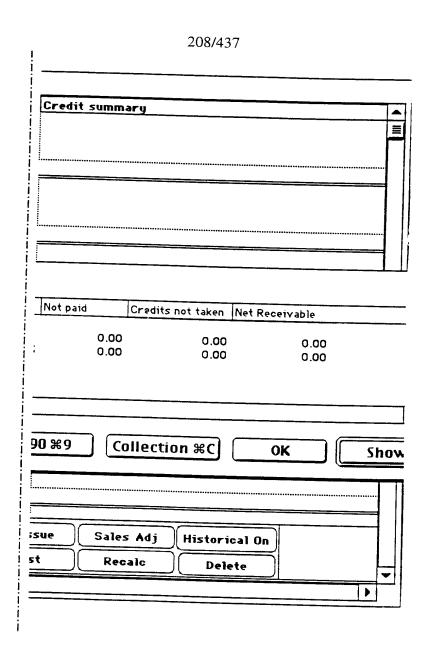
Invoice-Date-Term-	Type	Customer		¥	Custom	er PO
10840		SILICON GRA	PHICS INC			
6/22/96	N30	ACCOUNTS PA			)933-638	31
Customer	••••••	(415)961-135	1		01010	
Printed		R	-250572 <del>R</del> P (	(Temp225	90-1) Ap	orove
10843		FIRST DEPOS	IT			
6/22/96	<u>N3</u> 0	LINDA	•••••	(415	) 222-76	69
Customer	•••••	(415) 278-604	15			
Printed						•••••••
10844		ORACLE				
Totals (3 invoices		Total Invoiced	Total Cred	its Not	Invoiced	Sale
		i var mvonoed	1 ovar cred	113 11461	IIIAOICEG	12916
DRACLE SILICON GRAPHICS INC	1	1 <b>,05</b> 0.21		0.00	1,050.21	1
SILICON GRAPHICS INC	1	367.43	3 (	0.00	367.43	
			* ****			
			***************************************	••••••	****************	•••••
Options	BA			<b>_</b>	$\equiv$	
Obtions		2	A SE	<b>U</b>	+	ŧ
			- <u>-</u>	~	T	•
FastDsply	Sort	Sets	Search	New	Records	Re

**FIG. 85A** 

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MYS /	qту— гота	IITU- INY	O1Cea L	ert to pay	Age	Frt-Tx-RMA
M96-2	2590	01C1014	866 C	losed-Paid	Age: 46	ORIG No Frt
4,794.8		367.43				26.43
P: 367.	43 L:8/	<b>7/96</b> V:	PAID IN FUL	.L		
<u>_</u> i						
						nation
						38
	<del></del>	***************************************				1.1.1.1.1.1.
total	Tax total	Inst total	Ergisht total	Daid to date	Considération	en Net received
(0(0)	47 (0(9)	1137 (0/4)	ireight total	raid to date	Credits tak	en inet received
007.00	0.00	0.00	43.21	1,050.21	0.0	00 1,050.2
341.00	26.43	0.00	0.00	367.43		00 367.4
					<u> </u>	
			_		·	
				>30 %3	<b>)</b> \ >60	<b>3 3 3 3</b>
						***************************************
						De-
						De-
urn F	RelatedSwit	ch Quicks	Switch IL	Jeui	CHES	. ∭ Pe
1		on yalok	# ((C))			

**FIG. 85B** 



**FIG. 85C** 

Fig. 86

Fig.86A	Fig.86B

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ESL/TRW-AS Check: 429		/17/	95								
Amount	Cust in			st Cı	rd To	otal	Bala	ance			=
35,038.0	1	.062 <i>,</i> 40	44	-	5,02	4.43					
Edit Payment	Invoic	e Disb	Cr	edit	Disb	ī	Disb	to	Cash	*****	•••
Bal		.062 و 10		-	<mark>96ر4</mark>	7.05	-57.:	38			
Stub -> Payment	distribution	n (red	=Credit	,				8.	dit	) <b>+</b> [	3
Check Stub Pa	rnd=Not	Reconcil	<u>ed. ital</u>	ics=N	ot Cle	ared)					
Check Stub Re	I KEI III	Y : App	nea to	114	pe	Stu	) Ai	nnt	Appli	<u>ed Am</u>	u
4731	473	1   4731		i lov	oice	: 2	1 00	6 20	 		_
4737		7 4737	************		oice	• • • • • • • • • • • • • • • • • • • •		6.75		4,866.	
4829	•••••	9 4829		lnv				9.41		5,646. 9, <b>5</b> 49.	
DM32890/4829		9 CM-4	1829-1	-≀Cre	dit	- •		9.86	***	.749 راد. .749 را	•••
DM32889/4695		5 CM-4						7.64	•••	-467.	•••
			••••••••		***********	•	••••••				
					_		**********	••••••	T	**************	,
									<b>4</b> IIII		-
nvoices applied	(gray bck	grnd=sh	ort pay	)				1	Credit m	emos a	- )[
Invoice Date	MYS		Inv A		:		P	;	Credit	Memo	Ī
4731 12/06	/94 M94	-17130	24,86	6.28	24,	866.28	3 2		CM-482		
4829 12/13	/94 M94	-17204	9,54	9.41	9,	549.4	1		CM-469		
4737 12/06	/94 M94	-17135	5,64	6.75	5,6	646.7	5			******	
		••••••			<u></u>			Щ.	***************************************	•••••	
	<u> </u>		<u> </u>		<u> </u>						l
■ 4   1111	)						•	ΙXΙ			ł

**FIG. 86A** 

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	Created by Thu:nnn 01/20/95
	Reconciled
	Approved
************	□ Posted
	AR Youcher number
	Notes
Rec C	DM32889 INVOICE 4695 PAID ON CHECK 429068 DM32888/4737 AMT\$2806.93 CM\$2806.92
d (red=Deb	it Memo/gray bokgrnd=Issue)
te Cr	edit Dstrbtd Taken Tt
/26/95 1 5/4/95	,749.86 1,749.86 1,749.86 467.64 467.64 467.64
1316	
1311	

**FIG. 86B** 

Fig. 87

Fig.87A	Fig.87B

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Referenc	e red≃uni	reconciled	Customer		
429069	Check	Reconciled	ESL/TRW-ASG		
130068	Check	Reconciled	ESL/TRW-ASG		
95150	Check		NETWORK GENER	AL CORP.	
0002354	15Check		PACIFIC BELL LO	S ANGELES	
613394	Check		Symantec Corpor	ration	
· · · · · · · · · · · · · · · · · · ·					
	Sort S	ets	Search	Total	Return R

**FIG. 87A** 

Discrepency Am	ount red=customer o	Wes
.01 Over Credit		
	-57.38 IntCred	57.37 BadDebt
8.68 Over Credit		
	-8.69 IntCred	.01 BadDebt
443.25 Over Credit		
734.59 Over Payme	ent Closed	
	Options	

# **FIG. 87B**

Fig.88

Fig.88A	Fig.88B
i ig.ouA	Fig.ood

Cust	Payme	nts			<b>—</b>		
	DEPOSIT			·····			
	21851		21/95				
Amount		Cust Inv	Total	Cus	crd To	tal	Balance
22	7,253.67	227	,253.67	<u></u>		-	
	ty ment	Invoice	Disb	Cred	lit Disb		Disb to
	7,253.67		,211.59				42.08
Stub -> P	ayment dis	tribution	(red=cr	edit,			( )
Chack C	au bekarn	<u>d=Not Re</u>	conciled.	italic	s=Not Cle		
CHECK S	tub Ref	Kel INV	Applie	d to	Туре	Stu	b Amnt
5015	:	E01E	: 5015	;		:	4.5- 4.
5487		5015			Invoice	<u></u>	163.66
5846			5487 5846		Invoice		466.60
6127			6127		Invoice	<u></u>	4,210.5 <u>,</u> 445.55
6128	•	****************	6128		Invoice		446.65
6129	•••••••••••••••••••••••••••••••••••••••	6129			Invoice		2,658.99
6139			6139		Invoice	· · · · · · · · · · · · · · · · · · ·	2,990.74
			***************************************				
Invoices a		ray bekgr	nd=short	pay)			
Invoice	Date	MYS	in	nA Y	nnt Dst	rbtd	Pi
	12/28/9			163	• • • • • • • • • • • • • • • • • • • •	63.6	
5487	02/10/9	5 M95-1	7874	466	.60 4	166.6	
5846 6127	03/21/9	5 : M95-1	8289			210.5	*******
0127	04/07/9	5 : M95-1	8406 :	445	. <b>5</b> 5 4	145.5	5
	11111						$\rightarrow$ X
					ignijiminės ja		s g
K 7 N					<b>♦</b> 23	<b>₩</b>	<b>₩</b>

**FIG. 88A** 

217/437

			CuetD	auma	Dto. Mo.	difu Dass
				ayıne	11(S; MO	dify Reco
			Create	ed by		
			Thu:r	חתו	07/24/9	5
			⊠ R	econcil	ed	
				pprove		
***************************************		************		osted		
sh			AR V	oucher	number	
<b></b>		<u>n</u>	1	<del></del>		
pplied Amı			otes		···	
ppried Ami	it : Kec :					
163.	66 ✓					
466.0	60 √					
4,210.5	*********************					
445.5 446.6	········					
2,658.9						
2,990.	********					
1111						
dit memos ap	plied (red	=Debit №	1emo/gr	ay bekgi	rnd=Issue)	
edit Memo	Date	Cred	it D	strbtd	Taken T	t
•••••••••••				***************************************		
***************************************		•	······•	•••••		
***************************************			••••••	***************************************		
	<b>◆</b> IIII					
x	<sub>[-[</sub>	¶   ,			<b>√</b>	$\overline{\searrow}$
	سسكه ا	:		//	\\	X/

**FIG. 88B** 

Fig. 89

Fig.89A Fig.89B	Fig.89C
-----------------	---------

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Invoice -pay -ven/terms	in -En -Ry	MVS /atu = cost	PO -billed
		●INVENTORY● 4	10 billed
<b>1</b> · · · · · · · · · · · · · · · · · · ·	10/7/96	5,600.00	5 600 00
TECHDATA N30	* * * * * * * * * * * * * * * * * * * *	P:5 600 00 1:5 60	10.00 12/5/96
	AP Posted		1270750
50-01138-21	2/5/97	M97-24410 1	24410
<b></b>	2/11/97	41.69	41.69
<u> </u>	2/7/97	P: 41.69 L: 41.69	* * * * * * * * * * * * * * * * * * *
	AP Posted		
236139711	2/10/97	Multiple 8	
<b> </b>	<b>&gt;</b>	6,441.52	6 441 52
1 1 1	2/11/97	P:6,441.52 L:6,44	11.52 3/5/97 #
	AP Posted	need or. \$35.00	
11-38282-11	6/5/97	Multiple 10	
Merisel	6/9/97	777.40	777 43
Merisel N30	6/6/97	P: 777.43 L: 777.43	
	~		
13-32564-11	6/1/97	M97-24919 1	24919
	6/9/97		360.24
	6/6/97	P: 360.24 L: 360.24	
		***************************************	
1012	5/21/97	Expenses	
	6/10/97	•••••••••	900.00
LANIER ELEC N30	00/00/00	P: 900.00 L: 900.00	
Options (Exc	BA		······································
	CITY CITY		+
Dupes Problems  Vendor RMA	Soi	rt Sets Find	Nova Boomede B
	301	c Sets rind	New Records Ri
4   1111			

**FIG. 89A** 

lext payment	Status-problem	RMA -Ycredit	Disc-Dt-\$-L
••••••	Paid-Ord		10/3/96
	J		Avail:
9157 R: mul	tiple V:		
• • • • • • • • • • • • • • • • • • • •	Paid-cRMA-BC	R-257429CR	2/5/97
R:multiple V	j 		Avail:
K. Martiple V	· 	\$41.69	***************************************
	Paid-Cred-BC	M. 712-1	
• • • • • • • • • • • • • • • • • • • •	aid-cred-BC	Multiple	2/10/97
372 R: multip	la U	Multiple	Avail:
	Y .	\$225.11	***************************************
	Paid-Cred-BC		6/5/97
• • • • • • • • • • • • • • • • • • • •	***************************************	*********	
R: multiple	V:		
• • • • • • • • • • • • • • • • • • • •	Paid-Ord		6/1/97
ز	·····		Avail:
R : multiple	<u> </u>	<u>į</u>	
	Paid-NR		E /04 /07
	Building		5/21/97 Avail:
R: multiple	V:	•••••••	nvell.
	<u>.</u>		
¶ a∏ R T		otal Billed	Remo
	30-	land to	The line
rn RelatedSwi	tch QuickSwitch	eed to pay	His

FIG. 89B

t Inv Stats R	eview Status	Date -	Pay -	Vouche
Inventory	[Ord]	11/2/96 -	- 5,600.00 -	
12965	[Cred]	3/7/97 - 4	44.60	
***************************************		. 3///9/-/	11.69 -	
Multiple	[Cred]	3/5/97 - 6	5,441.52 -	
•••••••••••••••••••••••••••••••••••••••			***************************************	***************************************
Multiple	[Ord]	7/5/97 - 7	777.43 -	
				•••••••••••••••••••••••••••••••••••••••
1 <b>353</b> 5	[Ord]	7/1/97 - 3	60.24 -	
		<u> </u>	***************************************	
to Invoices	[[rx]]	6/20/97 -	900.00 -	
			•••••••••••••••••••••••••••••••••••••••	
rePaid	Act Distribu	Ition		
al On	Set Partners			

**FIG. 89C** 

FIG. 90

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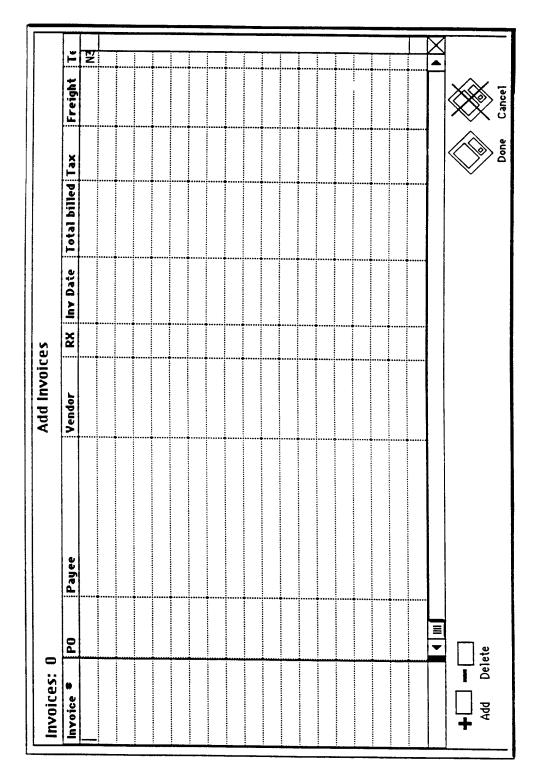


Fig. 91

Fig.91A	Fig.91B	Fig.91C

vendor	s Invoice		6	Cost of goods	sold
<b>Vendor</b> Merisel	Paye Meris	_	PO on inv	RMA on inv	Invoice No 11-14146-11
<b>Multiple</b> M97-24858	2 Customer	Total Billed	d Freight In	Freight Out	
M97-24859	Customer	Net Billed	Net Credit	Net Purch 11,184.50	<b>VenTerms</b> N30
	<u> </u>	Reconci	*****		Status
MYS	VeM Qt	y Cost/Tota	Price/Total	Description	<u> </u>
M97-24858 M97-24859 M97-24859	e 0 M T 2 e 0	2 4,335.00	2,331.00 4,661.00 9,322.00 242.00	EQUIUM 6200D DESKTOP TECRA 730XCD MMX 2.0GB 16 BATTERY LITH & T700 SERIES	OT PENT-150 MB 12.1 TFT ION T730 720
Ma			mments		
<b>⊠</b> Pre Appr		proved			
Reset	ey Yords				
Reset	Kecne	ck Rcvd			

**FIG. 91A** 

				edule		
Search	5/15/97			Revd		
nterest	Misc.		5/21 PAY	Paid	i	
			11,1	84.50	]	
1ega Vou	cher No		Meg	a PAY		
***************************************			Next	Pymnt		
RMA/OD	RD/SD		st In	r Cust/	<u> </u>	
	; KD F GD	Cu	3 C III Y	V: Cust7	i erms	
5/16/97	5/16/97	13	462¶		GRAPHICS	INC
37 107 37	5/16/97 5/19/97	·		CreditC	**********	
5/15/97	5/19/97	134	468¶		GRAPHICS	INC
	5/16/97			CreditC	**************	•••••••••••
5/15/97	5/19/97	13.	+08#	CreditC:	GRAPHICS	INC
*****************		•	•••••••	Credito	arg	
****						
*****************		1	************	<u></u>	•••••••••••	***************************************
				•		
				$\vdash$		

**FIG. 91B** 

			-
***************************************	***************************************	••••••	 
		•••••••••••••••••••••••••••••••••••••••	
•••••	***************************************	••••••	 
***************************************			
			 L
	<del> </del>		 <del>-  </del>

**FIG. 91C** 

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		Daily Vendor Verification	
	Found	10/16/97 3:13PM	Done
	62	Miscelaneous invoices (includes pre-approved)	,
		Clean with RMA full credit) - cRMA	***************************************
	2	Clean with Credit Memos (not RMA) - cCred	••••••
II	************	Clean reconciled by Credit - cRBCr	***************************************
		Clean inventory - clavent	***************************************
		Clean internal use - cint	***************************************
	20	Clean manually reconciled - cMan	*************
	3	Clean replacements - cRpl	
		Clean drop shipments - cDS	
		Completely Clean invoices - cC	
	53	Total clean invoices	
		No MWC No No MWC	
	ے 25	No MWS - NoMWS	
	65	Not reconciled (includes pre-approved) - NR	
	11	Replacement/RMA without credit - Cred	
	•	Not received discrepencies - Rovd	
	••••••	Not shipped discrepencies - Shpd	
	0	No customer invoices - Custinv	
	•	Freight/tax charges - FrTx	
		Order date discrepencies - Ord	
	99	Cost/Price discrepencies - CP	
		Total invoices with discrepencies	
	120	Not reconciled (not including pre-approved)	
	86	Reconciled	
		Pre-approved	
		Approved	
	7	Scheduled	
	215	Total not paid	
		i otal not palu	
(	Reve	rify Print Cancel Sh	
_			<u>ow)</u> )

FIG.92

Fig. 93

Fig.93A	Fig.93B	Fig.93C

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7				
Ven	Pmnt Regs	;		Approve
Disc	ount Rate	Disc	Paid/Posted	
Registe	er 330		▼ 169,158.72	
Dat	te 10/15/97		r 5,392.84	Register has been paid and cannot be
Cour	nt 93		y 163,765.88	modified
<u>\$40</u>	ve 🗆		led (Reconcile)	Notes
Payee	Vendor		Billed Amnt Due d	ate Amount
ATV	ATV	284647		2/97 22,401.25
				E1771: 22,701.25
DEUTSCHE	E-F SYNNEX	1894476	516.60 10/10	5/97 516.60
DELITORIJE				***************************************
DEUTSCHE	-f SYNNEX	1897681	1,109.00 10/1	3/97 1,109.00
DEUTSCHE	-EMioral	2744.0744		
DE0130,12	- TELLICY OD	234107611	530.60 10/15	5/97 530.60
DEUTSCHE	-f:MicroD	234107621	170.00: 40.445	- /0-1
	·····	207107021	170.28 10/15	797 170.28
DEUTSCHE	-f MicroD	234117011	1,530.61 10/15	7/97 1,530.61
				777: 1,330.61:
DEUTSCHE		234912611	1,431.80 10/16	/97 1,431.80
Invoice co				oice 169,158.72
Payee	Vendor		Total Credit Date	Credit
Multiple	TECHDATA	2-8285701	934.00 4/2	/97 934.00
*******************	TECHDATA	2.0660400	·	***************************************
Price Pro		2-8662409	96.00 9/29	/97 96.00
	TECHDATA	2-8666105	1,410.00 9/30	/07:
Credit cou		Reconct	iled Total Cr	
				3,372.64:

**FIG. 93A** 

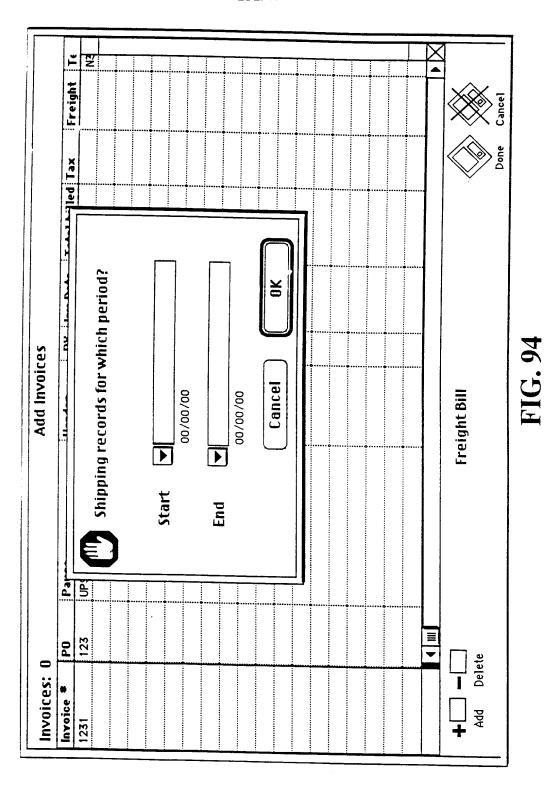
230/437 ■ Ven Pmnt Regs: Modify Recor Payees Credit Update Dish Reg **Vendors** ALL ATV ATV <u>Payee</u> DEUTSCHE-PLS CmpLnd ATV Merisel DEUTSCHE-PLS DEUTSCHE-PLS MicroD Merisel TECHDATA Merisel Microage MicroD Method Pay Ref Date Youcher TECHD AT A Check 9883 10/15/97 VIKING COM **WESTMICRO** Check 9884 10/15/97 Check 9884 10/15/97 Check 9884 10/15/97 **Print Drafts** Check 9884 10/15/97 **Yord Check** Check 9884 10/15/97 Quic Payee Check 9884 10/15/97 Comments Net Pay/Coll Total: 163,765.88 **Debit Vendors** 

**FIG. 93B** 

231/437 Payable To: ursement Register Ref/Chk Amount Date 20,619.33 7,303.46 3,073.72 3,857.75 123,609.62 1,140.00 4,162.00 apply quick checks **Print Checks** drag to the Disbursement Reg Reprint Check k Checks (orphans) Ref/Chk Amount Date test

**FIG. 93C** 

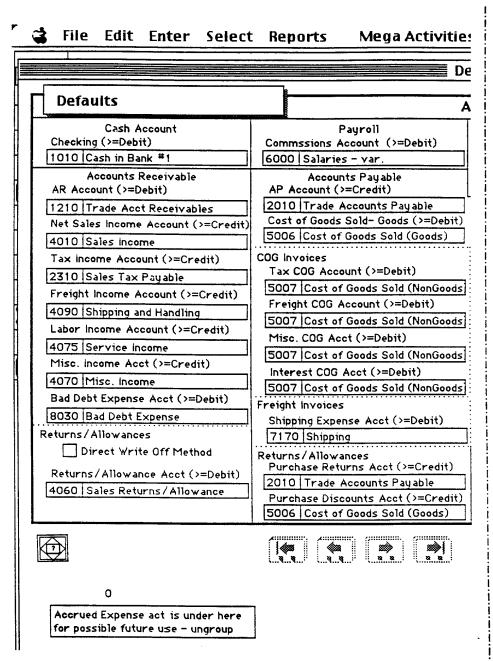
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SUBSTITUTE SHEET (RULE 26)

Fig. 95

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**FIG. 95A** 

aults: Modify Record			
counting Setup	-		
Credit Card (AR) Credit Card Expense Acct (>=Debit) 7410 Bank Charges Cr Card Accrued Income Acct (>=Ci			GL Closing Earnings (>=Credit) rior Year's Retained Earning
4015   Credit Card Accrued Income Accrued AP Account (>=Credit)			T
2050 Accrued Payable	٦		Check Amnt Pad
Tax Expense Account (>=Debit)  To expense  Freight Expense Account (>=Debit)  To expense  Misc. Expense Acct (>=Debit)  To expense  Interest Expense Acct (>=Debit)  To expense		xpense  xpense  xpense  xpense	
inventory Support Account for Cust Purch inventory			
MEGA CUSTOMER INVENTORY Account for RMA Inventory MEGA RMA INVENTORY Merchandise Inventory (>=Debit) 1410 Merchandise Inventory			

**FIG. 95B** 

ChartOfAccnts: Modify Records | **Details Switch Setup** Credit card account Credit to Increase Bank account Account Sales Income O Debit to Increase Account type Revenue 4010 Fianancial Code Account Code **ChartOfAccnts** 

SUBSTITUTE SHEET (RULE 26)

Fig. 97

Fig.97A	Fig.97B

Acct Code	Account	
BA 1010	Account Red = not opened  Cash in Bank #1	Account Type Asset
BA 1210	Trade Acct Receivables	Asset
BA 1220	Notes Receivable	Asset
BA 1240	Other Receivables	Asset
BA 1250	Employer's Loans and Advances	Asset
BA 1410	Merchandise Inventory	Asset
BA 1510	Prepaid Expense	Asset
BA 1520	Pepaid Fed. Corp. Tax	Asset
BA 1530	Prepaid Franchise Tax	Asset
BA 1610	Furniture and Fixtures	Asset
BA 1620	Office Equipment	Asset
BA 1630	Class Room Equipment	Asset
BA 1640	Vehicles	Asset
BA 1650	Leasehold improvement	Asset
BA 1710	ACC. Depreciation - F&F	Contra Asset
BA 1720	Acc. Depreciation - Office Equip.	Contra Asset
BA 1730	Acc. Depreciation - Class Room	Contra Asset
BA 1740	Acc. Depreciation - Lease Hold	Contra Asset
BA 1750	Loans to Shareholder	Asset
BL 2010	Trade Accounts Payable	Liabilitu
3L 2020	Auto Loan - Current	Liability
BL 2030	Loans Payable	Liability
3L 2040	Interest Payable	Liability
3L 2050	Accrued Payable	Liability
Fi	nance Codes	+









**FIG. 97A** 

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CI	hartOfAco	ents: 96 of 96	(Sales
Increase			1
Debit	Credit	644,025.30	7
Debit	Credit	855,100.21	1
Debit	Credit		1
Debit	Credit		1
Debit	Credit		
Debit	Credit	15,569.00	1
Debit	Credit		
Credit	Debit		
Credit	Debit		
Credit	Debit		
Credit	Debit		
Debit	Credit		
Credit	Debit		
Credit	Debit		
Credit	Debit		
Credit	Debit		
Credit	Debit		
)		-	
Qu Qu	ickSwitch		

**FIG. 97B** 

Fig. 98

Fig.98A	Fig.98B

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	ChartOfAccnts: M
Chart	Officents
1	Ban
Fianancia	
1	t Code 4010 Account Sales Income
	t type Revenue
Date	Account Titles and Explanation
5/14/97	Net sales for 5/14/97
4/10/97	Net sales for 4/10/97
4/11/97	Net sales for 4/11/97
4/11/97	Net sales for 4/11/97
6/10/97	Net sales for 6/10/97
	•

**FIG. 98A** 

( accoun	t	Credi	Credit card account					
	○ Deb	it to Increase	Credit to Incr	ease				
Ref	Debit	Credit	Balance	4				
547		27,854	.00 27,854.0	00 =				
554		30,791		_ ;;;				
556		42,015						
557		635						
559		115,568		_				
_								
	<del>-</del>							
	<del></del>							
	<u> </u>			_				
				_				
				_				
<del>-  </del>				_				
				_ <del>\</del> 0				
•	c	urrent balland	e 216,863.3					
				$\sim$				

FIG. 98B

Fig. 99

Fig.99A	Fig.99B

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				_Rcvable: M
Accts_Rcvable		······		Customer
Company Name: ORACLE	•			
Receivables Acts		√ Set	Def	Freight Income
Accounts Receivable (>=	=Deb	it) 企		Freight Act
✓ Trade Acct Receivables		₽	+ -	✓ Shipping ar
Sales income Acts		√ Set	Def	Labor Income/
Sales Acts (>=Credit)		仓		Labor Acts
✓ Sales Income			+	✓ Service Inc
Tax Income/Payable Acts		- √ Set	Def	Misc. Income A
Tax Acts (>=Credit)		슌		Misc Incom
✓ Sales Tax Payable		₽ II	+	✓ Misc. Incor
				<b>(+)</b>

FIG. 99A

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<u> </u>					
odify Re	cords 🧮				
Setup					
	Company C Oracle	ode:	Seq*:	Sales Rep (	
/Payable Act		et Def		NO.CASTRO	
5 (>=Credit	t) {	7			17,
d Handling					
***************************************			XXXX		
***************************************	₹.	_			₹
'ayable Acts	( √ Se	t Def			
(>=Credit)	<b></b>	7	[] {Op	en Accour	ıt
ome		1			
		<b>  T</b>			
<u></u>	- ত		ļ		
cts	√ Se	t Def	Ī		
• Acts (>=C	redit) 🕜	1			
<u>1e</u>			ma-	edit Card Ad	1
***************************************		<b></b>	l		ı
	₽.		L ins	rentory Acc	t
			<del></del>		
					ł
	<b>4</b>	<b>**</b>			

FIG. 99B

Fig. 100

Fig.100A	Fig.100B

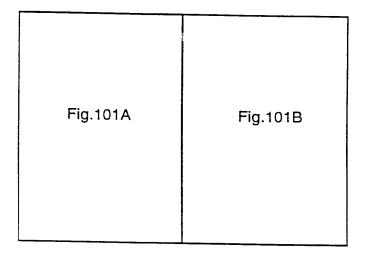
Account BEEBOY FILE	(Red = Not approved)	GL Act
NAVAL SUPPLY CENTER		
WATKINS JOHNSON		
NASA AMES RESEARCH CENTER		
CITY OF MOUNTAIN VIEW		
UNITED AIRLINES		
Symantec Corporation		
ORACLE		Sales income
Silicon Systems US2 NAVAL WEAPONS STATION CA		
PAC BELL EDI		
Goldman, Sachs		
Delete Sort Set	Z Search	Get Inventory Get Credit Card
Delete Sort Set	2 Search	

### FIG. 100A

## 248/437 ■ Customers: 12 of 903 (Sales-MIL ■ **Current Balance 30** 60 90 222,304.12 7,553.00 104,288.00 623,510.96 763,048.50 4,372,277.53 499,156.82 13,239.00 133,896.08 Options RelatedSwitch QuickSwitch

FIG. 100B

Fig. 101



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R	cct	s_Rcvable	Accts_Rcvable: M
Com OR AC	pang LE	Name:	Accounting
Date		Account Titles and Expla	anation
	0/97	Customer Invoice 13308 issu	
	1/97	Customer Invoice 13320 issu	
4/1	1/97	Customer Invoice 13326 issu	
	·PSS4	es ·	
Addr			
		MYS Company name	Contact
Of T	y <b>pe</b> her	ORACLE	Contact
Of T	ype ther rHse	OR ACLE OR ACLE	Contact
Of T	ype ther rHse	ORACLE	Contact
Of T	ype ther rHse	OR ACLE OR ACLE	Contact
Of T	ype ther rHse	ORACLE ORACLE	

FIG. 101A

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odify Ro	ecords 🚞				
Inform	ation		······································		
	Company Co Oracle	de :	Seq#: 123	Sales Rep RJ.CASTI	
Ref	Debit	Credit	t ·	Balance	슌
554	2,294.90			2,294	
558	378.88			2,673	
558	38.97			2,712	
					<u>.</u>
	Curre	ent bal	lance	2,712	
Address 1			C	ity	仑
500 OR ACLE	E P ARKW AY			edwood City	
500 OR ACLE				edwood City	
E00 00 401				- 4 4 Cit	<u>0</u>
ete (	Duplicate	E	dit	Add	
		Se	tup		
				_ 💚 /	/ <b>%</b> X

FIG. 101B

Fig. 102

Fig.102A	Fig.102B

			Acc	ts_Pay
Accts_Payable		<b>—</b>	Partner (	al Satur
Partner Name		<b></b>		Partner
Ingram MicroD				1
Accounts Payable (>=Credit)	(V Se	t Def	Accrued Pa	MicroD
✓ Trade Accounts Payable	ক্র	<u> </u>	✓ Accrued	
			- Accided	ayable
	-			***************************************
	<u> </u>	-		***************************************
COG Accounts (>=Debit)	√ Se	t Def	COG Misc.	Account
✓ Cost of Goods Sold (Goods)	む		✓ Cost of G	
			***************************************	•••••
				••••••
	<u>.</u>	<u></u>		
COG Tax Accounts (>=Debit)	√ Se	t Def	COG Intere	st Accou
✓ Cost of Goods Sold (NonGoods)	<u></u>	İ	✓ Cost of G	oods Sold
	<b></b>	- 🗀	*******************************	***************************************
	- <b>       </b>			***************************************
COG Ei-bh A	<u></u> ।			
COG Freight Accounts (>=Debit)  ✓ Cost of Goods Sold (NonGoods)		t Def		
# COSt 01 Goods Sold (NonGoods)	살			
		•		
	- <del>-</del>	-[		
	1~1			
test		, gumi		
	١	<b>201</b>		<b>→</b>

FIG. 102A

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able: Modify Records		
abier roung necords		
р	Approved	
Code Credit Payee MicroD  [>=Credit)	☐ Vendor ☐ Mar.ufacturer ☐ Carrier ☐ Payee ☐ Expense Payee ☐ State Tax Payee  Reserved space for more expense payees ☐ Àutomatic Invoice	
Open Account Reset Defaults  AP Subledger Acrd Payable Acrd in	To the state of th	·

FIG. 102B

WO 99/33016 PCT/US98/27496

Fig. 103

Code	Partner Name		
MicroD	Ingram MicroD		Red= BaseLine vende
	d (800) 274-4800		· · · · <u>· · · ·</u> · · · · · · · <u>· · · ·</u> · · · ·
CmpLnd		Ven ☐ Mf	gr 🗌 Car 🔀 Payee
	Computer land d (800) 354-9368	· · · · · <u></u> · · · · · <u></u> · · · ·	· · · · <u>· · · · · · · · · · · · · · · </u>
Merisel		☑ Ven ☐ Mf	gr 🗌 Car 🛛 Payee
	Merisel	<u></u> <u></u>	
	d (800) 462-5241	Ven      Mf       Mf	gr 🗌 Car 🛛 Payee
Mega 1	Mega Network, inc		
	(408) 730-9138	✓ Ven  ☐ Mfc	Jr □ Car ☒ Payee
ordMarc .	WordMARC Interna	tional Corporati	on
Aprv	800-835-2400	X Ven Mer	ır 🗌 Car 🛛 Payee
1ICROCNTRI	MICRO CENTRAL, II	NC	- Car eyee
	800-836-4276	· · · · · · · · · · · · · · · · · · ·	r 🗌 Car 🛛 Payee
MI	VMI CORP		Car Maladee
☐ Aprve	408-745-1700	✓ Ven ☐ Mfg	r □ Car ⊠ Payee
e <b>M</b>	IBM CORPORATION	<u> </u>	r car Mrayee
Aprvo	408-452-4810	Van M Men	r ☐ Car ☒ Payee
CG	International Comp	uter Granting	r 🔲 car 🔼 Payee
Aprvo	(800) 659-4244		r 🗌 Car 🔯 Payee
ompaq	compaq	ZZ Ven [ ] I-irgi	r ∐ Car ⊠ Payee
Aprvd	(800) 231-9977	Muss Mass	
ARDBAGY	WARD-BAGY PKG IN	ven Mitgi	r 🗌 Car 🔀 Payee
<u></u>	(408) -262-2111	<u></u>	· · <u>· · · · · · · · · · · · · · · · · </u>
ZERTY	AZERTY INC.	Ven      Mfgı	r 🗌 Car 🔀 Payee
	(800) -888-8080	·····	· <u>, </u>
		XI Van I Mfn	Car Dallea
	עעעעע 2		<u>+</u>
De	elete/Maint Sets	Search	New Records R

## FIG. 103A

Partners: 1065 of 1065 (Sales-MU			
Accounts payable	Acrued payable	Total payable	Accrued Invoice
Expense 🛭 COG	Cost of Goods Sold	(Goods)	
☐ Expense ⊠ COG	Cost of Goods Sold	(Goods)	
☐ E×pense 🗵 COG	Cost of Goods Sold	(Goods)	
Expense 🛭 COG	Cost of Goods Sold	(Goods)	• • • • • • • • • • • • • • • • • • • •
Expense COG			
Expense 🛭 COG	Cost of Goods Sold	(Goods)	
Expense COG	····		•••••
Expense 🛭 COG	Cost of Goods Sold	(Goods)	
☐ E×pense ⊠ COG	Cost of Goods Sold	(Goods)	
Expense 🛭 COG	Cost of Goods Sold	(Goods)	
Expense COG	l.		
Fynanca Mrnc	Cart of Goode Sold	(Coode)	
n QuickSwitch	Vendors Locked Approve	Options	

FIG. 103B

Fig. 104

Accts	_Payable -	Partner Acc
Partner N		
Ingram Mid	croD	
Date	Account Titles and Explanation	on .
3/27/96	To record received items without	invoice.
		g

FIG. 104A

artner C	ode	Credit	Payee			
Ref	Debi	MicroD	Con dia			_
560	Debi		Credit	(157	Balance	<u>1</u>
			3,80	61.53	3,661.53	=
	_					
						Y
		ued pay.			3,661.53	
		nt Accou			11,632.14	
L	Cu	rrent To	tal Pay	able	15,293.67	

FIG. 104B

FIG. 105A

FIG. 105A FIG. 105B

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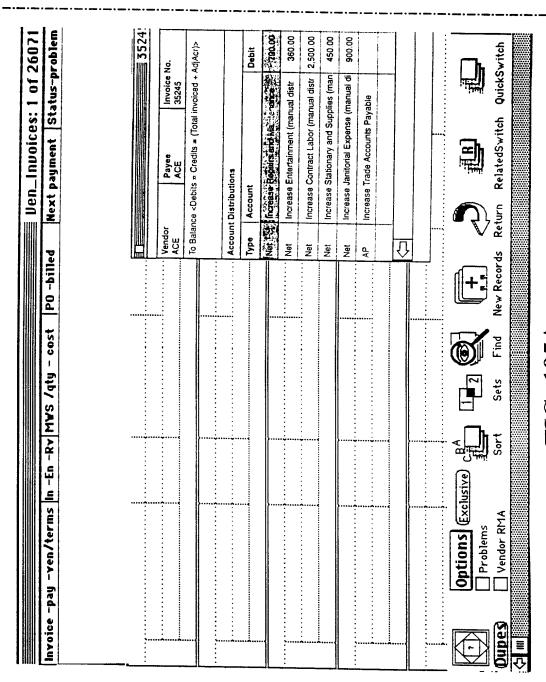
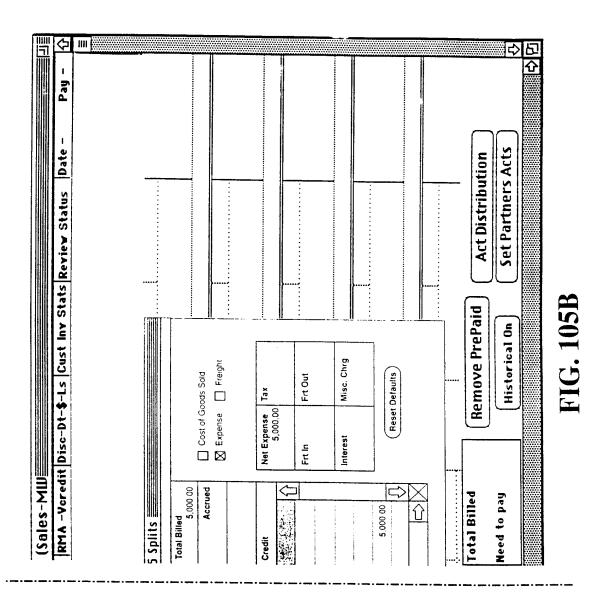


FIG. 105A

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SUBSTITUTE SHEET (RULE 26)

Fig. 106

|--|

		Gen_Journal: 58 o
	Date	Account Titles and Explanation
548	5/13/97	Cash in Bank #1
548		Trade Acct Receivables
548		To record cash received to AR 5/13/97
547	5/14/97	Trade Acct Receivables
547		Sales Income
547		Sales Tax Payable
547		Shipping and Handling
547		To record Customer Invoices issued 5/14/97
548	5/15/97	Cash in Bank #1
548		Trade Acct Receivables
548		To record cash received to AR 5/15/97
549	5/19/97	Cash in Bank #1
549		Trade Acct Receivables
549		To record cash received to AR 5/19/97
220	5/23/97	Cash in Bank #1
550		Trade Acct Receivables
\$50		To record cash received to AR 5/23/97
7	Cash Re	Search Manual Entry
存 m		

FIG. 106A

WO 99/33016 PCT/US98/27496

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Post Ref	Debit	Credit
1010	1,915.84	
1210		1,919.84
1210	30,183.75	
4010		27,854.00
2310		2,298.98
4090		30.77
1010	74,615.40	
1210		74,615.40
1010	59,649.38	
1210		59,649.38
1010	11,804.31	
1210		11,804.31
延		Sort
R <b>el</b> atedS	Switch QuickS	witch Show I

FIG. 106B

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															×	
	Credit	T	•				•		••••		•		•			Past
	Post Ref Debit					÷	<del>.</del>			•		•		ls:		Cancel
lger 🚃	Post I				•	•		•••••				•		Totals:		
🛢 General Ledger 🖺	Janation															, İ
	Account Title and Explanation															å — — odify Entry
	Accoun							***************************************								Delete Entry Modify Entry
	Date						••••	••••								+ Add Entry D

FIG. 107

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FIG. 108A FIG. 108B FIG. 108C FIG. 108D

## FIG.~108A

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				Financials: N
Income Statement 2	ent 2		Trend Analysis	
Line Column	Field			
Add Delete Add Delete	Headers   Clear			Portrait
Col-1	Co1-2	Co1-3	Col-4	Col-5
Operating revenue				
Gross Sales				B-Sales Income
Less: Sales discount			B-Sales Discount	
Sales return and allowance			B-Sales Returns/All Calculated	Calculated
Net sales				Calculated
Blank				
Cost of good sold	•••••			
Merchandise inventory start of period			B-Merchandise Inve	
Purchase		B-Sales Income		
Less: Purchase discount	B- Purchase Discour			
Purchase return and allowances	B- Purchase Returns Calculated	Calculated		
Net purchase		Calculated		
Add Transportation		B-Cost of Goods So		• • • • • • • • • • • • • • • • • • •
Net cost of purchase			Calculated	
Cost of good available for sale			Calculated	
Less: Merchandise Inventory - end of period			B-Merchandise Inve	
Cost of goods sold				Calculated
Gross Margin				
Blank				
Operating expense			••••	

FIG. 108A

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Reports used (Links)   Used by:   □   □   □   □   □   □   □   □   □	٠ <u>٠</u>	₽ S		rican Express □				nd Advances	ory		×	׿	res		nt		ent	F&F
Reports used BA 1210 BA 1210 BA 1216 BA 1220 BA 1220 BA 1220 BA 1220 BA 1220 BA 1220 BA 1220 BA 1620 BA 1620 BA 1630 BA 1630 BA 1630 BA 1630 BA 1630 BA 1630 BA 1630 BA 1630	4	Chart of Account	Tropy Asst	Accts Revolts - Ame	Accts Rcvbls - Visa	Notes Receivable	Other Receivables	Employer's Loans a	Merchandise Invent	Prepaid Expense	Pepaid Fed. Corp. Ta	Prepaid Franchise T	Furniture and Fixtu	Office Equipment	Class Room Equipme	Vehicles	Leasehold improven	ACC. Depreciation -
	eports used		1210		_	_	_	_	_	-	_	_	_	1620	1630	1640	1650	1710
			( <del>)</del>	3 60	<u> </u>	<b>6</b>	8	<u> </u>	<u> </u>	<u> </u>	<u> </u>	œ .	a a	/B	B	18 B	8	18 18

# FIG. 108B

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<u> </u>			
			ф
Calculated			Net Income
B-Interest Expense	•		Interest expense
		•	Non operating expense
Calculated			
B-Interest income			Interest revenue
			Non operating revenue
•		****	Non Operation revenue and expense
			Blank
Celculated			Income from operations
Calculated			Total operating expense
	B-Computer Expensi Calculated	B-Compute	Supplies expense
	- Cui	B-Insurance	Insurance expense
	eges .	B-Officer wages	Salaries expense exacutive
			Adminstrative expense
	senses Calculated	B-Msc. Expenses	Other selling expense
	tion	B-Depreciation	Depreciation expense
		B-Utilities	Utilities expense
	pense	B-Office Expense	Supplies expense
		B-Rent	Rent expense
	ng and M	B-Advertising and M	Advertising expense
•	lets	B-Multiple Acts	Sales salaries and commission expense
			Selling expense

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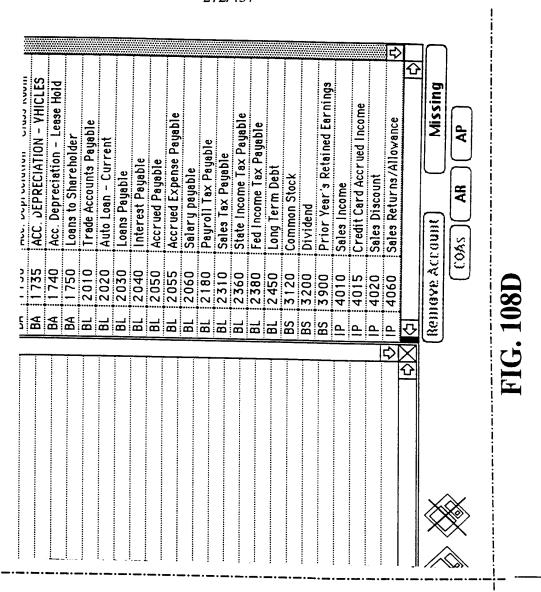


Fig. 109A

	274/437		
100,000.00 200,000.00 -100,000.00			-100,000.00
100,000.00	100,000.00	100.000.00	100,000.00
	100,000.00	200,000.00 -100,000.00 100,000.00	
	100 000 00	100,000.00	
Gross sales Less:Sales discounts Sales returns and allowances Net sales	Cost of good sold  Merchandise inventory, start of period Purchases	Purchase returns and allowances Net purchases Add: Transportation-in Net cost of purchases	Less:Merchandise Inventory - end of period Cost of goods sold Gross Margin

FIG. 109A

Operating expenses:

100,000,000 100,000.00 100,000	100,000.00 -300,000.00
Selling expences Sales salaries and commissions expenses Advertising expenses Rent expenses Supplies expenses Utilities expenses Other selling expenses Administrative expenses Salaries expenses Salaries expenses Supplies expenses Total operating expenses	Nonoperating revenues and expenses Nonoperating revenues Interest revenue

Nonoperating expenses Interest expenses

Net Income

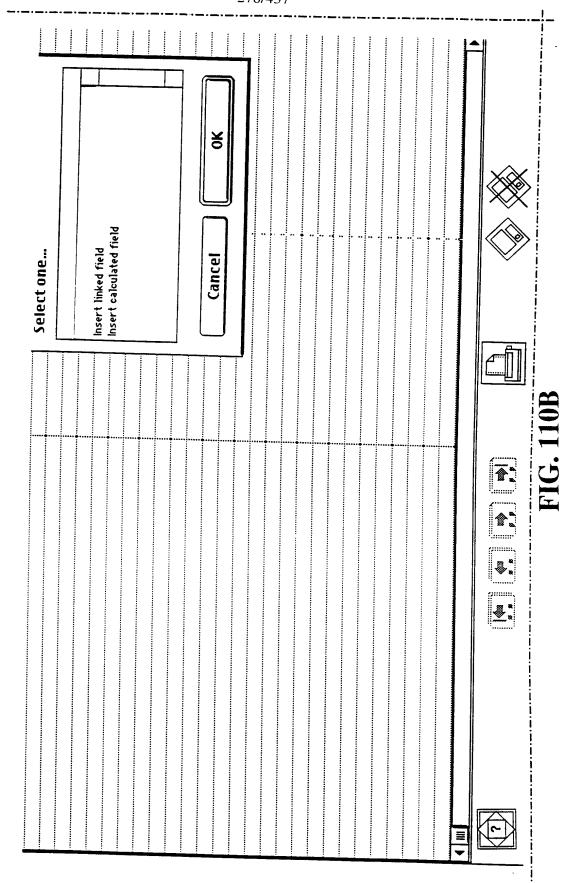
Fig. 110

Fig.110A	Fig.110C
Fig.110B	Fig.110D

Trend Test  Column  Column  Add Delete  Plot labels:	Field Clear	⊠ Trend Analysis		Start Date Pick	
Add Delete	ırs			Fnd Date Pick	
Plot labels: Trend analysis for			O Portrait	(1) Landscape	
rend analysis for		Plot-1			
			•		
			-		
			•		
			••		
			••		
					-
			•		

FIG. 110A



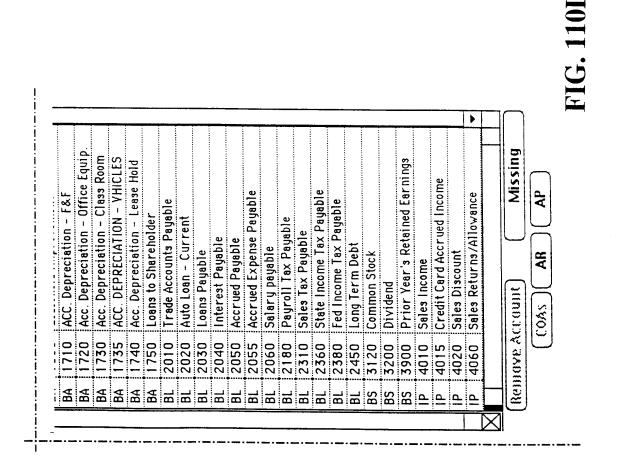


SUBSTITUTE SHEET (RULE 26)

<b> </b>	_	4 111	1	1		:	:			-	-			-		
used (Links) Used by :	Chart of Accounts	Trade Acct Receivables	Accts Rcvbls - American Express	Accts Rcvbls - Visa	Notes Receivable	Other Receivables	Employer's Loans and Advances	Merchandise Inventory	Prepaid Expense	Pepaid Fed. Corp. Tax	Prepaid Franchise Tax	Furniture and Fixtures	Office Equipment	Class Room Equipment	Vehicles	Leasehold 1mprovement
\$		1210	1215	1216	1220	1240	1250	1410	1510	1520	1530	1610	1620	1630	1640	1650
Repor		ВА	BA	ВА	ВА	ВА	ВА	ВА	ВА	ВА	BA	ВА	ВА	ВА	ВА	ВА

#### SUBSTITUTE SHEET (RULE 26)

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SUBSTITUTE SHEET (RULE 26)

Fig. 111

Fig.111A	Fig.111B	Fig.111C
Fig.111D	Fig.111E	Fig.111F

Trend Test					
Line Column  + Headers  Add Delete Add Delete	Field				
Plot labels:	Cash in Bank				
Trend analysis for:	B-Cash in Bank #1				
	•				
	•				
***************************************					

**FIG. 111A** 

🛛 Trend Analysis		Start Date		
		End Date	Pick	
	OPortrait	<ul><li>Lands</li></ul>	scape	
	Trade Accou	nts Payable	<u> </u>	
				<b>₩</b>
		***************************************		
	•			
************				
••••••				
***************************************				••••••
************				********
······································				
***************************************				
Tre	nd frequency	•		
				-,   <b> </b>
				_
Week	ly		<u>\Z</u>	<u> </u>
Monti	hly			
Quart				
Annu			ĺ	
Speci	ify Dates		<u> -</u>	╡
			र	<b>기   </b>
			ok	
				/

FIG. 111B

Rep	orts use	d (Links) Used by :	
		↔	[
			Γ
		<del>l</del>	-
		Chart of Accounts	`
ΙE	7110	Office Expense	1,
ΙĒ	6020	Officer wages	
BA	1240	Other Receivables	
ΙE	6110	Pauroll Tax Expense	
BL	2180	Payroll Tax Payable	
BA	1520	Pepaid Fed. Corp. Tax	
ΙE	7130	Postage and Courier Services	
BA	1510	Prepaid Expense	
	1530	Prepaid Franchise Tax	
	3900	Prior Year's Retained Earnings	
Р	5020	Purchase Discount	
Р	5030	Purchase Returns	
Р	5005	Purchases	
Ε	7010	Rent	
E	7040	Repairs and Maintenance	
Ε	6010	Salaries - Fixed	
E	6000	Salaries - var.	
3 L	2060	Salary payable	
P	4020	Sales Discount	{
Р	4010	Sales Income	
Р	4060	Sales Returns/Allowance	{
3 L	2310	Sales Tax Payable	{
E	7180	Security	
Р	4075	Service Income	
E	7170	Shipping	
P	4090	Shipping and Handling	
E	9010	State Income Tax Expense	
3L	2360	State Income Tax Payable	-4

FIG. 111C

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	i
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? (***) *** *** ***	=   
	:

FIG. 111D

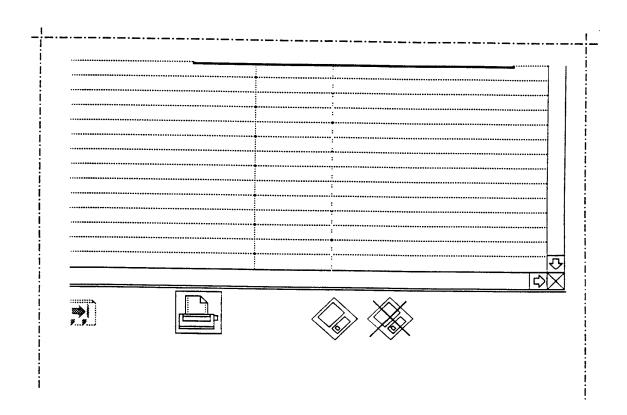


FIG. 111E

E	7140	Stationary and Supplies	
E	7220	Taxes - Others	
E	8150	Taxes - Penalty	
E	7030	Telephone	
Ε	8754	Test	
Ε	79899	Test 2 Expense	
Ε	99999	TEST 3	***
Ε	98989	TEST 4	***************************************
Ε	7999	TEST EXPENSE	
		***************************************	
BA	1210	Trade Acct Receivables	
Ε	7350	Travel	
Ε	7020	Utilities	亞
<b>♦</b>			<b>₽</b>
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		COAS AR AP	)

FIG. 111F

Fig. 112

Fig.112A	Fig.112B

Trend 1	rest •	Field	
Add Delete	Headers	Clear	
let labels:		Cash in Bank *1	
read energis for:		B-Cash in Bank e1	
		d report raw data	
	Plot lai	xels:	Cash
	Feb 97 Mar 97	,	4 ,207
	Apr 97 May 9	•	2,861 9,585
	Jun 97		2,400 7,067
	Olmi	anda haran kari ilma da akari	
	·		

FIG. 112A

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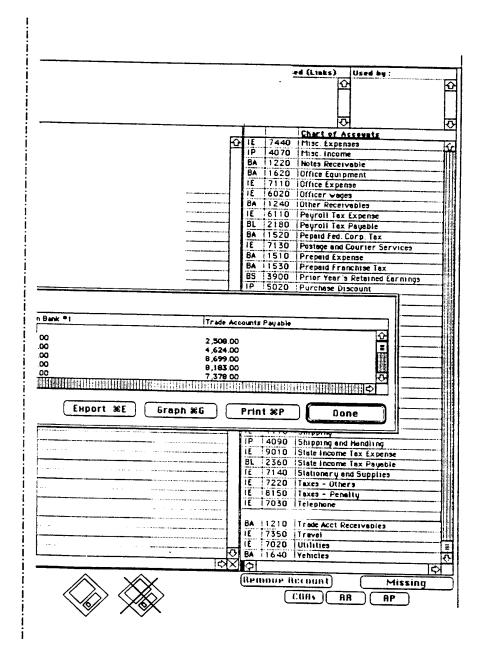
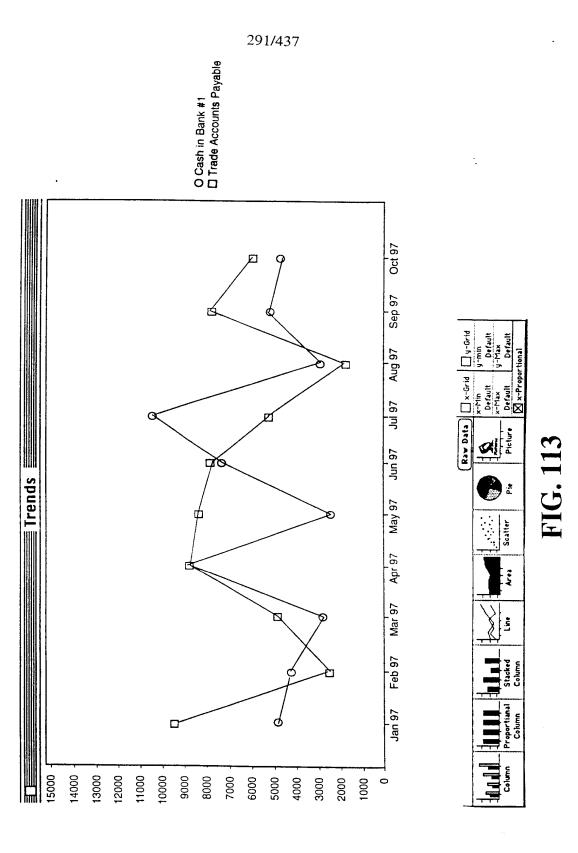
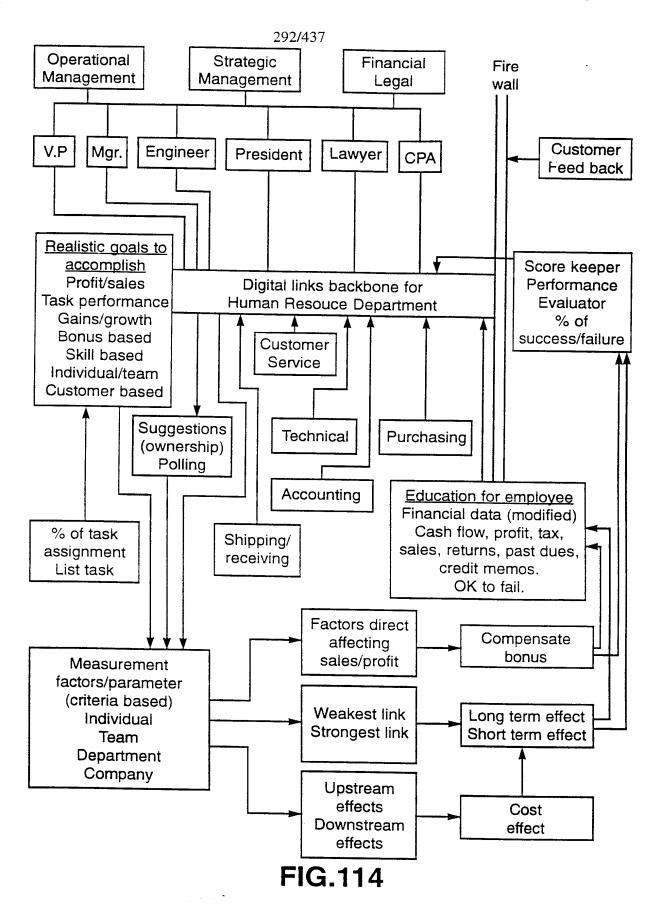


FIG. 112B



SUBSTITUTE SHEET (RULE 26)



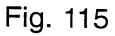
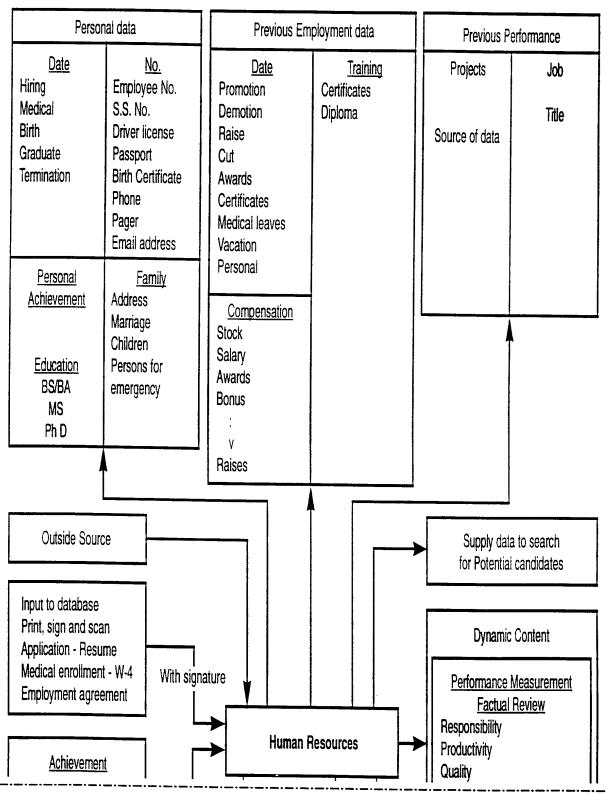


Fig.115A

Fig. 115B

#### Candidate

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**FIG.115A** 

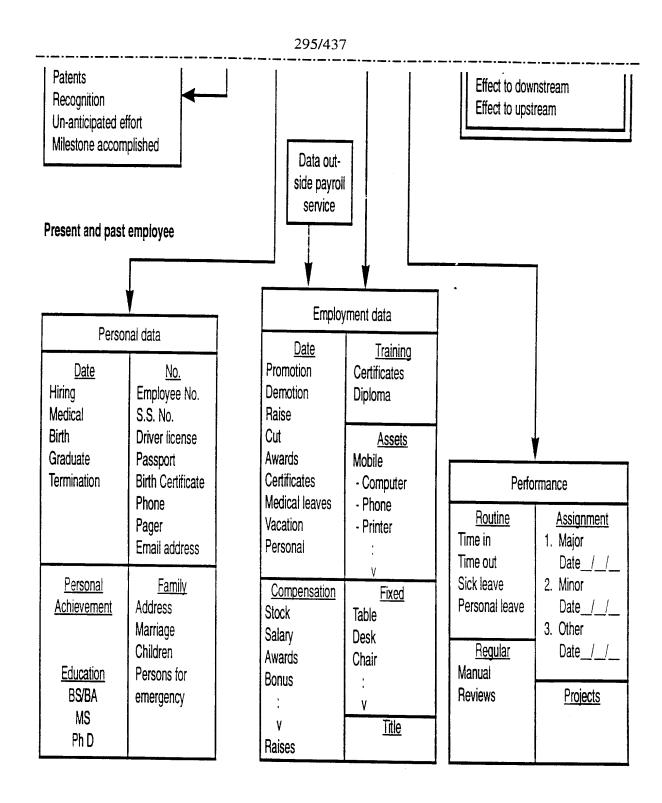


FIG.115B

Fig. 116	Fig.116A	Fig.116B	Fig.116C	Fig.116D	Fig.116E
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Algorithm of Activity Data

	297/437				
	Downetream		Customer Service	Purchase	A/R
	linetraam		Customer	Customer Service	Purchase
	RMA	Amt. by period	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr.
Ŋ	RI	Day between date	V. rec.date V. Ship C.rec.date C. ship Create date	V. rec.date V. Ship C.rec.date C. ship Create date Fax	V. rec.date V. Ship C.rec.date C. ship
Major Measuring Category	Responsible Dent		Sales	Sales Customer Service	Account Receivable Shipping
Maj	Time between date		Create date Post date Quote date	Create date Reviewed post date	Issue date Printed date Paid date
	\$ by period		Total amt. Pcost, Scost Install cost Freight cost	Total amt., Pcost, Scost, Install cost, Freight cost	Total amt. Sprice, Install cost,
	Otv by period		No., No. convert to MWS	Total iems, Total amt	Total Inv., Total RMA, # of 30days, 45 days,
	Assignment		Quotes	MWS	Cust.Inv.

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	ΑP	A/R	A/P
	Purchase	Sales	Sales
Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr.
Create date Fax	V. rec.date V. Ship C.rec.date C. ship Create date Fax	V. rec.date V. Ship C.rec.date C. ship Create date Fax	V. rec.date C.rec.date V. Ship C. ship
	Account Payable Engineering	Account Receivable Sales Engineering	Account Payable
Input	Received from ven. Ship to cust. Due date Paid date Approved Scheduled Reviewed Entry Create date	Create date Issue date	Ven.cr. memo Rcv'd date
Freight, Tax	Total amt., Vcost, Pcost, Freight, Tax	Total cr., Sprice, Pcost, Restock, Tax	Total ven. cr., Pcost, Vcost,
etc.	Total Inv #, Past due # of invoices - 30, 60, 90 days	Total items Credit memo	Total items Ven.cr.
	Ven.Inv.	Cust.Cr.	Ven.Cr.

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	Ship	Customer	Α/P	
	Purchase Sales Rcv	Purchase	Vendor Purchase	
C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	
Create date Fax	V. rec.date V. Ship C.rec.date C. ship Create date	V. rec.date V. Ship C.rec.date C. ship Create date	V. rec.date V. Ship C.rec.date C. ship Create date Fax	V. rec.date
Sales	Engineering/ Install/ Assembly/ Test	Ship/ Receive/ Inside Sales	Account Payable	
Payment date	Install date Completed Test date	Receive date Ship date	Ven.payment Check Post Approve	
Restock, Tax	Total Install cost, linstall price, Ven.Install cost	Total freight amount	Total amount, Total credit, Total check	
	ltems/system Total MWS	Total Boxes Total Items	Ven. Invoices V.cr.memo Exp.cr.memo	
	Engineering Install Assembly Test	Ship Receive	Ven. Payment	

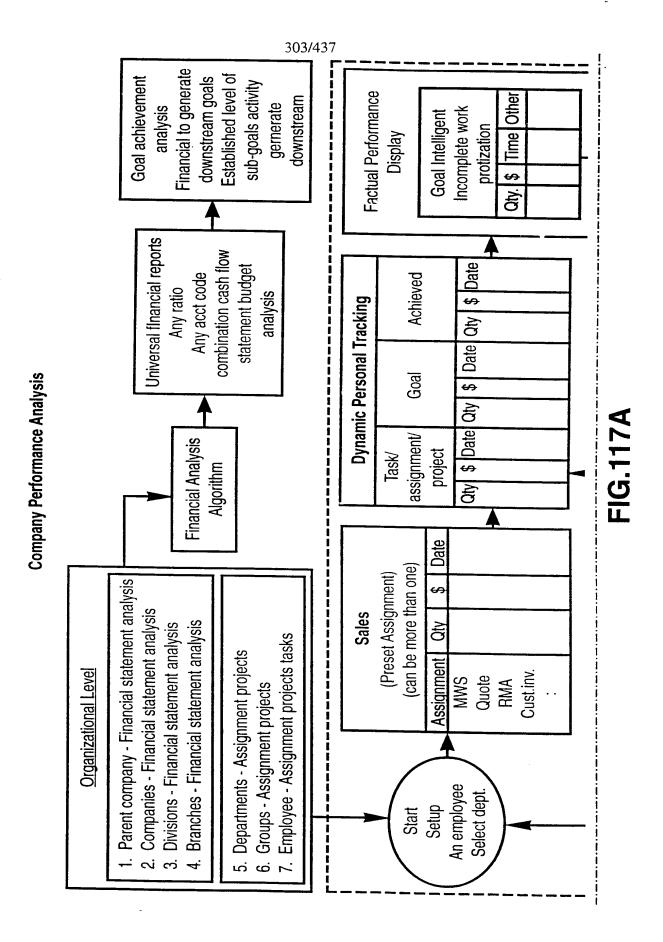
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A/R	A/P A/R	Purchase Customer Service	Ship/Rcv Install/ Engineering
Ship Sales	Sales Rcv	Sales	Purchase
Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr
V. Ship C.rec.date C. ship Create date Fax	V. rec.date V. Ship C.rec.date C. ship Create date Fax	V. rec.date V. Ship C.rec.date C. ship Create date Fax	V. rec.date V. Ship C.rec.date C. ship Create date
Account Receivable	CSR Sales Ship/Rcv Engineering Sales Account		Sales Account
C.payment Check Post Approve	RMA V. rcv'd RMA V. ship RMA C. rcv'd RMA C. ship	Duration/customer Rate of growth/ period	Duration/customer Rate of growth/ period
Total amount	Total RMA credit	Total \$ Total \$ per cust. % of Avg. of margin	Unclear inv. Inv. \$ Clear inv., %
Cust. Invoices C.cr.memo	Total RMA items	# of customer	# of vendor
Cust. Payment	RMA	Customer	Vendor

L	1	1
(	2	)
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	1	5
L	1	_

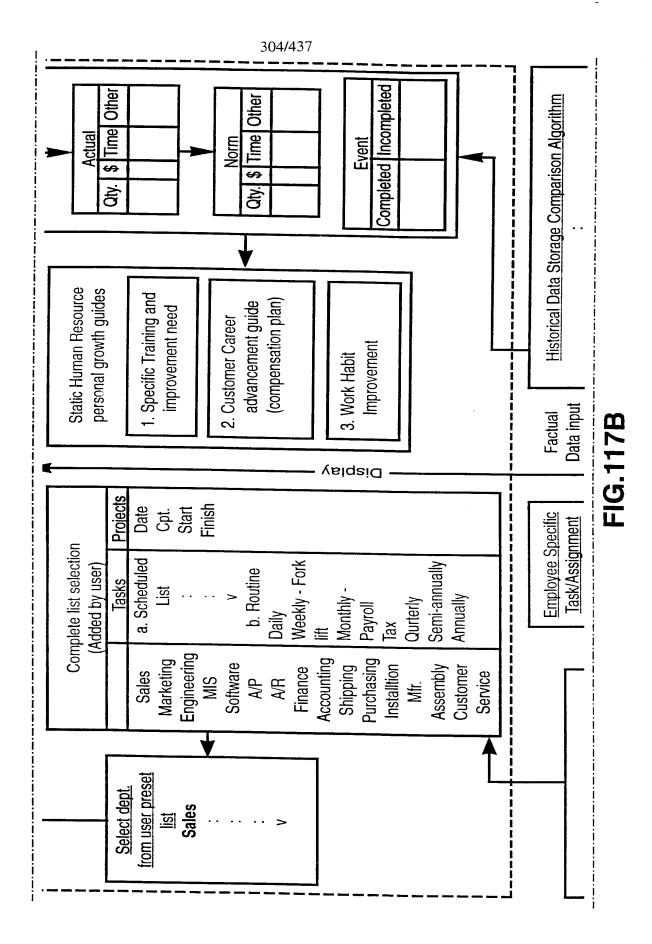
! —	_	301/437	
	Ship/Rcv Install/ Engineering	Customer Service	NA
	Sales	Vendor Customer Purchase	NA
	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr	Exp. V.cr. V. cr. C. cr. Rec. cr
Fax	V. rec.date V. Ship C.rec.date C. ship Create date	V. rec.date V. Ship C.rec.date C. ship Create date	V. rec.date V. Ship C.rec.date C. ship Create date Fax
	A/P Buyer Sales	Sales Purchasing	Accounting Purchasing
	Order date, MWS date, Rec'd date, B/O rec'd date, Item order date	\$/period	
	Scost Pcost	\$ Rate of increase	Total A/P Total A/R
	Total items Total MWS B/O items	# of format	Total V. inv. Total C. inv
	Purchase	Commission/ earning	Financial

Fig.117A
Fig.117B
Fig.117C

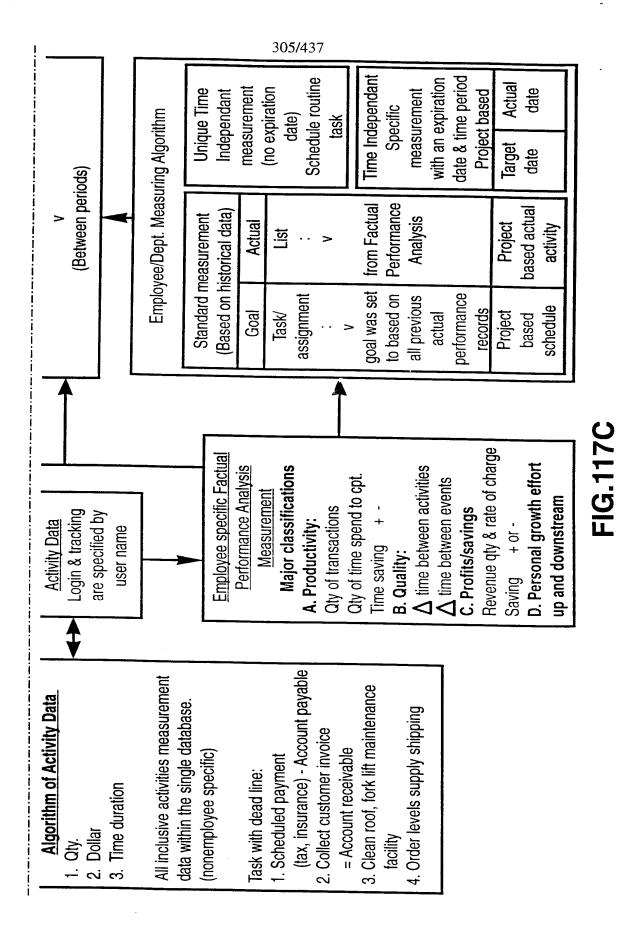


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PCT/US98/27496



SUBSTITUTE SHEET (RULE 26)



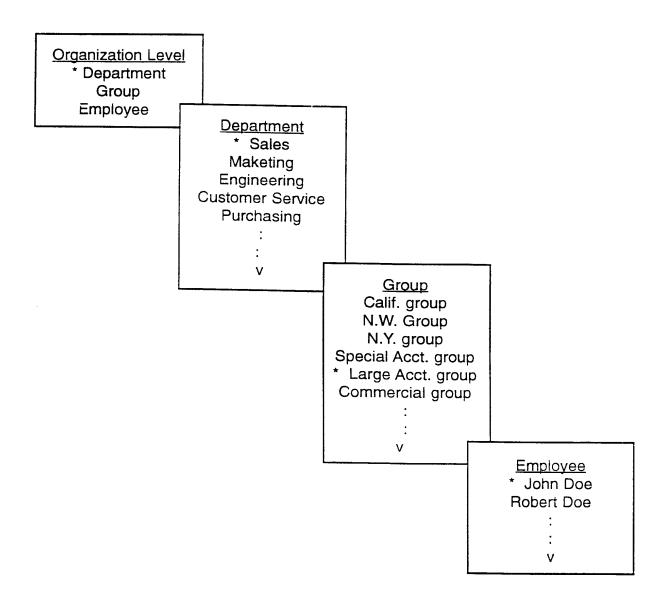


FIG.118

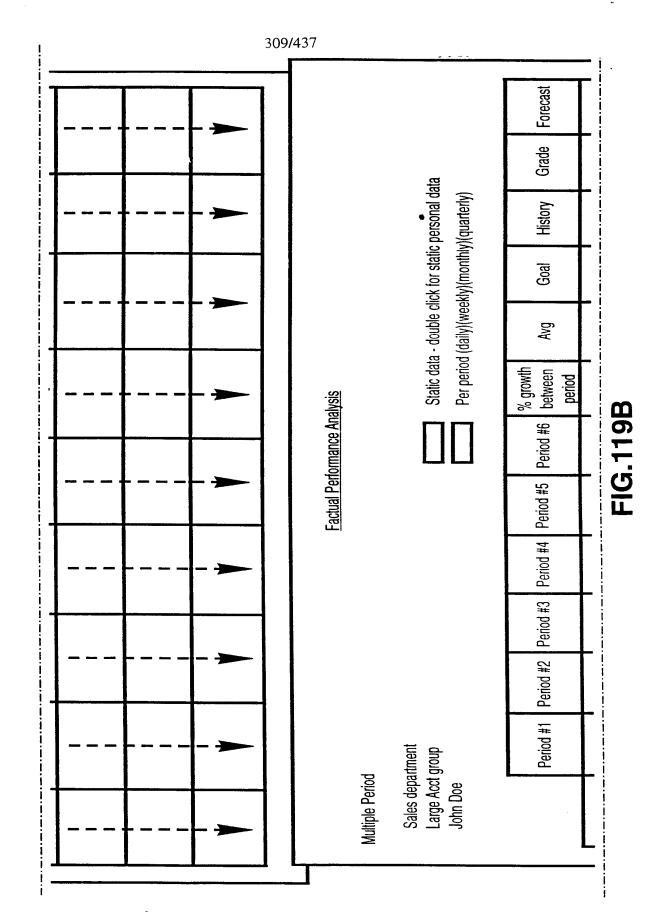
Fig. 119

Fig.119A	Fig.119B	Fig.119C

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		Downstream		Customer Service	Purchasing	Purchasing ?eceiving
	data y)	-	Opsiream	Customer	Customer	Inside Sales
	Static data - double click for static personal data Per period (daily)(weekly)(monthly)(quarterly)	Profitability (C)	Gross Margin	NA	Commission earned Gross margin	Restocking fee Partial vendor cr.memo
<u> Inalysis</u>	tic data - double clic period (daily)(week	Quality (B)	Accounting C.Cr. memo (B2)	NA	# of invoice /cr.memo	# RMA retum for credit # RMA retum for exchange
Factual Performance Analysis	Sta	Qua	Time period (B1)	PO date Quote date	Create date Review date	Create date Cust. rec'd date
Fac			% profit/period (A3)			
		Productivity (A)	\$/period (A2)			
	artment group		Qty/period (A1)			
Single Period	Sales department Large Acct group John Doe		Measuring Parameter	Quotes	MWS	RMA

FIG.1



SUBSTITUTE SHEET (RULE 26)

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				]
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A/B/C	A/B/C	A/B/C	A/B/C	
A/B/C	A/B/C	A/B/C	A/B/C	
A/B/C	A/B/C	A/B/C	A/B/C	
A/B/C	A/B/C	A/B/C	A/B/C	
A/B/C	A/B/C	A/B/C	A/B/C	C)
A/B/C	A/B/C	A/B/C	A/B/C	A3, B1, B2, (
Measuring Parameter	Quotes	MWS	RMA	Select: A1, A2, A3, B1, B2, C
				· · · ·

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Fig. 120A

		Forecast				
	<b>₽</b>	Grade				
	personal da ((quarterly)	History				
	ck for static	Goal				
	Static Jata - double click for static personal data Per period (daily)(weekly)(monthly)(quarterly) (Choose a period)	Avg				
<u>ialysis</u>	Static Jata - double Per period (daily)(v	% growth between period				
Factual Performance Analysis		Period #6				
Factual Per		Period #5				
		Period #4				
		Period #3				
		Period #2				
	Sales department Large Acct group John Doe	Period #1	A/B/C			
	Sales department Large Acct group John Doe		Measuring Parameter	Quotes	MWS	RMA

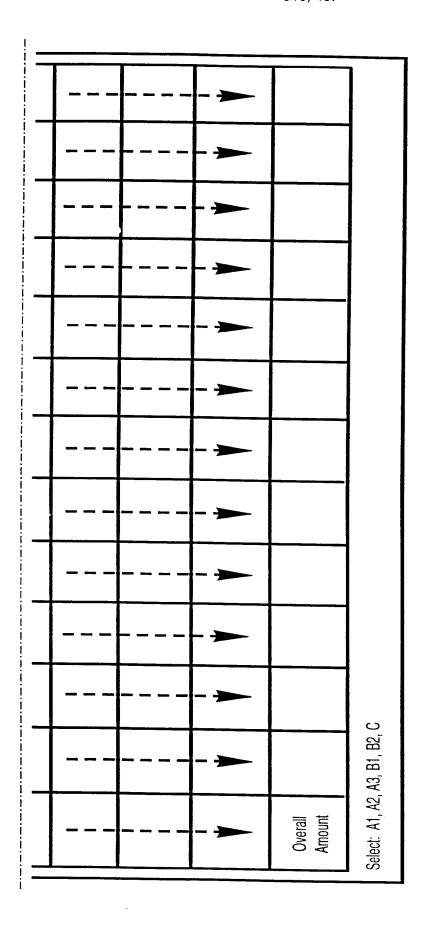


Fig. 121

Fig.121A	Fig.121B	Fig.121C
----------	----------	----------

Invoice -pay -ven/	terms in -	En −Rv	MY	S /qty	- cost	PO -bi
1975912-01				-0085	1	8
ITT	00/	00/00		98.8	0	97
CmpLnd	N30 3/2	2/93	P:2	,605.96	L: 95	9.00 9/1
1171613-01	7/1	/93	1 1	Invoice	ec. U	
ITT	00/	00/00	. I	Invoice		P <b>O</b>
CmpLnd	N30 7/1	/93	d F-			70
			]  -	4415611	-02	
178411-01	7/5	/93	-	***************************************		******************
ITT	00/	00/00	`  <b> </b>	•••••		
CmpLnd	N30 7/6		Ħ	••••••		
			]			
171612-01	5/1	9/93	н			***************************************
ITT		00/00	`  <b> </b>	••••••		*************************
CmpLnd	N30 5/1	9/93	F	••••••		••••••
			<u> </u>	••••••	<u> </u>	********************
171611-01	4/2	2/93	<b>7</b> ]			*************************
ITT	00/	00/00		***********		
CmpLnd	N30 00/	00/00	F			
TESTING						
905011-01	4/14	1/93				***************************************
ITT		00/00		************************		********************
CmpLnd	N30 4/14	1/93			•	
		•••••••••••••••••••••••••••••••••••••••	11	••••••		
415611-02	4/2	/93	7	***************************************	······································	•••••••••••••••••••••••••••••••••••••••
ITT		00/00		***************		•••••
CmpLnd	N30 4/2			·····		<b>∢</b> m
		·····	1  -			1 1111
			11	+	-	
		• • • • • • • • • • • • • • • • • • • •		Add	Delet	e
	_	•••••••••••••••••••••••••••••••••••••••				
Option	Exclusiv	e BA		1	<b>69</b> 7	
Probl			႕	2		<u>+</u>
	r RMA	Sor	t	Sets	Find	New Rec

FIG. 121A

		Auu IIIvu	וועצ			_
<sup>2</sup> ay ee		Vendor	RX	Inv Date	Total billed	Tax
	***************************************			•		
***************************************	••••••••	•			•	
	An Inv	oice with t	his inv	oice num	iber is alrea	ady
	An inve	oice with ted for this p	this inv payee!	roice num	iber is alrea	ady
	An inv	oice with t	his inv	oice num	ober is alrea	ady

FIG. 121B

317/437 Review Status Date -Pay -Vou Freight Te ЕИ 110e-290 N ePaid **Act Distribution** l On Set Partners Acts

FIG. 121C

Fig. 122

Fig.122A	Fig.122B	Fig.122C
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Invoice -pay -ven/term	s In -En -Ry	MYS /qty -	cost	PO -billed
55245	5/17/98			
RX ACE	6/12/98	Invoices:	0	
ACE N	00/00/00	Invoice *	PO	Payee
		1234567		ITT
••••		1234567		
	••••			
)		***************************************		
		***************************************		
		••••••		
		***************************************	<b></b>	
•••••••••••••••••••••••••••••••••••••••		***************************************		• • • • • • • • • • • • • • • • • • • •
		***************************************		
·····		***************************************		······
		***************************************	<u> </u>	
	•••	***************************************		•••••••••••••••••••••••••••••••••••••••
••••		***************************************		
				<b>388888888888</b>
	<del></del>		♦ 1	Ш
Options @	xclusive	+		
Problems	XCIUSIVE) C	Add De	elete	
Dupes Vendor RM	A 311			

FIG. 122A

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				dit Disc-Dt-\$	= -	
	Add Invoices					
	Vendor	RX		Total billed	Tax	F
***************************************	ITT		12/21/97	10,000.00		
***************************************				•		
			••••••••••••••••••••••••••••••••••••••			
***************************************				•	***************************************	
			: :		••••••••	
***************************************			••• •••••••••••••••••••••••••••••••••••	•	•••••	
	:	:	•			
***************************************			••••••			
You batc	have alrea h.	ıdy ent	ered this	invoice on	this	
You batc	have alrea h.	idy ent	ered this	invoice on	this	
You batc	have alrea h.	idy ent	ered this	invoice on	this	
You batc	have alrea h.	idy ent	ered this			
You batc	have alrea h.	idy ent	ered this	invoice on		

FIG. 122B

ny Stats Rev	iew Status	Date -	Pay -
	[[rx]]	6/16/98	- 5,000.00 -
	]]]		
reight Te		<u> </u>	
N∃Ĉ			
N3			
	<del> </del>		
			***************************************
		*******************	***************************************
			***************************************
<b></b>		************************	••••
$\Rightarrow X$			
<b>XX</b>	<u>'</u>		
XX	rt Distribu	tion	
ancel	t Partners		

FIG. 122C

Fig. 123

Fig.123A	Fig.123B	Fig.123C

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Invoice -pay -	ven/terms	In -En -Ry	MYS /qty -	cost F	O -billed
19/2912-01		5/10/93	M97-0085	_1_	85
ITT		00/00/0d			
CmpLnd		3/22/93	Invoices:	0	
			Invoice *	PO	Payee
1171613-01		7/1/93	4415611-02		
ITT		00/00/00		†	*******
CmpLnd	N30	7/1/93		·	
				<u> </u>	
1178411-01		7/5/93			
ITT		00/00/00		ļ	
CmpLnd		7/6/93			
		70723		<u>[</u>	
171612-01		110/07			
ITT		5/19/93			
CmpLnd		00/00/00		‡·····	•••••
CITIPLITO	N30 :5	719/93			
43444			***************************************		
171611-01	4	/22/93			
ITT		0/00/00			
CmpLnd	N30 0	0/00/00			
TESTING			•••••		
905011-01	4	/14/93			
ITT		0/00/00			
CmpLnd		/14/93		***************************************	***************************************
				***************************************	***************************************
415611-02	. 1	/2/93		<b>4</b> m	
ITT		0/00/00		V- III (8	
		- 1	+		
	tions (Excl	ısive) c	Add Dele	ete	
	roblems	<b>4</b>	5010		
upes 🔲 v	endor RMA	يا ا	·		

FIG. 123A

	em F	RMA -Vered	lit Disc-Dt-\$	-15 0	ıct
Paid-NP				23 (0,	<u> </u>
Add Invoic	es				
Vendor	RX	Inv Date	Total billed	Tax	
		•			
•	•••••				
		: •			
	••••••	***************************************		**************	
	***************************************				
		***************************************	••••••	***************	
			ОК		
				Done	<i>&gt;</i>
	Vendor	Vendor RX	Vendor RX Inv Date	Vendor RX Inv Date Total billed  Voice with this invoice number is alread for this payee!	Vendor RX Inv Date Total billed Tax  Voice with this invoice number is already red for this payee!

FIG. 123B

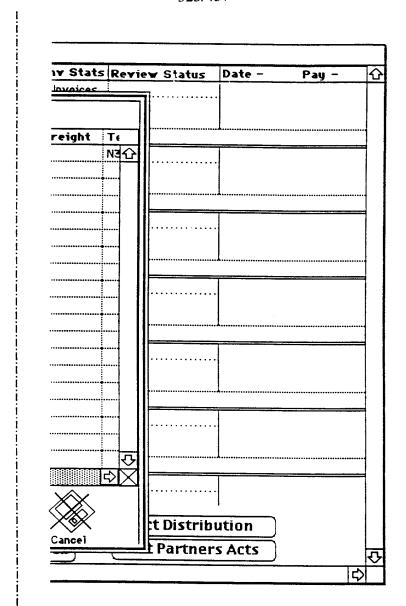


FIG. 123C

Fig 124

Fig. 124A	Fig. 124C	Fig. 124D
Fig. 124B		

r .	327/437	•
File	<b>^</b>	ga Activities Help
	Get all not paid	
	Get not reconciled	Ver
	Get Reconciled	
	Reconcile with credit	
	Pre-Approve	
	Get Pre-Approve	
	Remove Pre-Approve	
	APPROVE	
	Get approved	There are ı
	Schedule payments	
	Schedule pre-paid payments	
	Get discount paymnents	į
	Schedule discount payments	
	Close selection	
	HOLD selection	į
	Get Hold	!
 		į

# FIG. 124A

Close selection... HOLD selection... Get Hold Reset status back 1... Edit terms/payment/vouchers... Integrity check Temporary notes Update invoice New Records Rela Mark ready for review Get ready to review Mark reviewed Get reviewed **Get Tracking** Mark for Tracking Remove tracking Tracking notes Current status/Review status Cash flow analysis AP Processing Show Invoice Detail

FIG. 124B

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FIG. 124C

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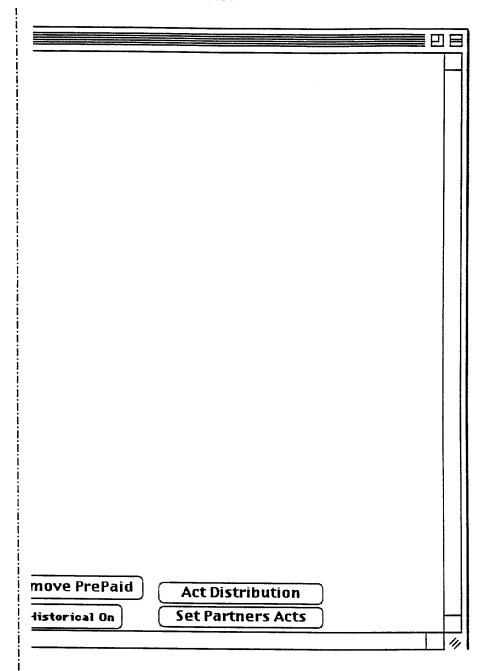


FIG. 124D

Fig 125

Fig. 125A	Fig. 125B	Fig. 125C
Fig. 125D		

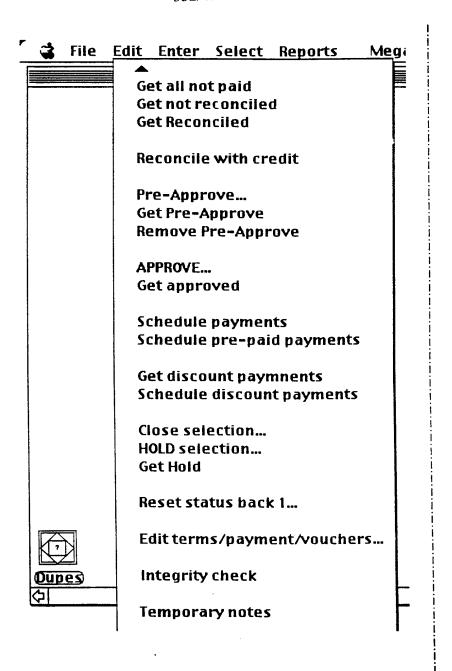


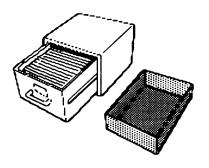
FIG. 125A

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### a Activities Help

■ Ven\_Invoices: 0 of 26071 (Sales-MW

## There are no selected records for: Ven\_Invoice



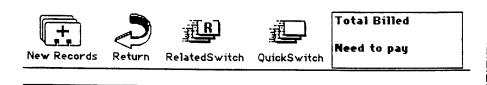


FIG. 125B

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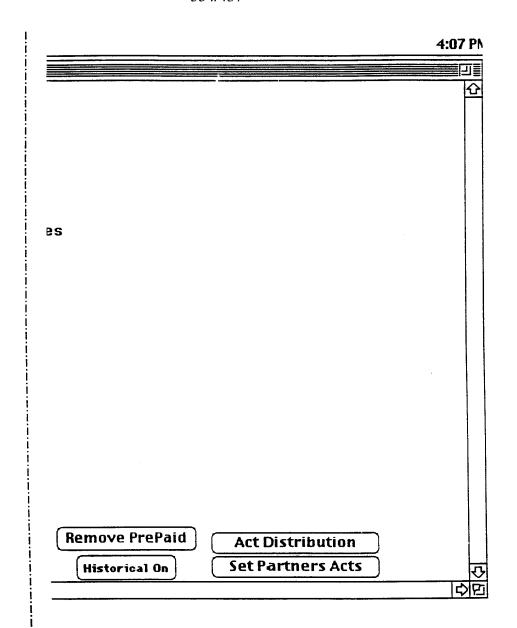


FIG. 125C

Update invoice

Mark ready for review

Get ready to review Mark reviewed Get reviewed

Get Tracking Mark for Tracking Remove tracking Tracking notes

FIG. 125D

Fig 126

Fig. 126A	Fig. 126C	Fig. 126D
Fig. 126B		

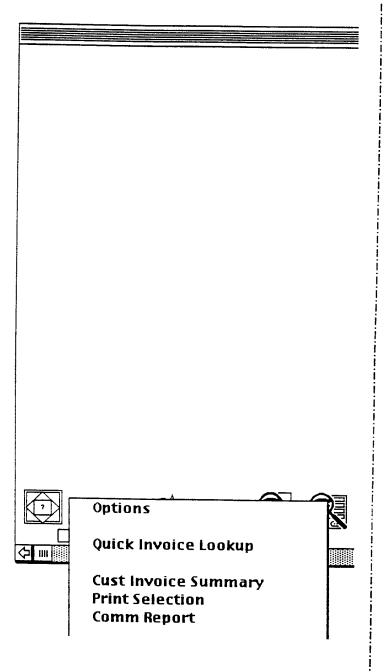


FIG. 126A

Get AR Report selection Get Not Issued Get not paid Get no charge Get pre-paid

Close - No charge

Split Invoice

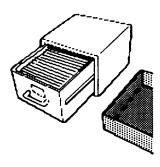
Join 2 Invoices

Issue Invoices

## FIG. 126B

**Cus**t\_Invoices: 0 of 14573 (

There are no selected records



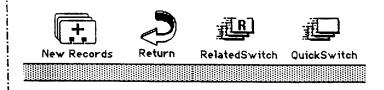


FIG. 126C

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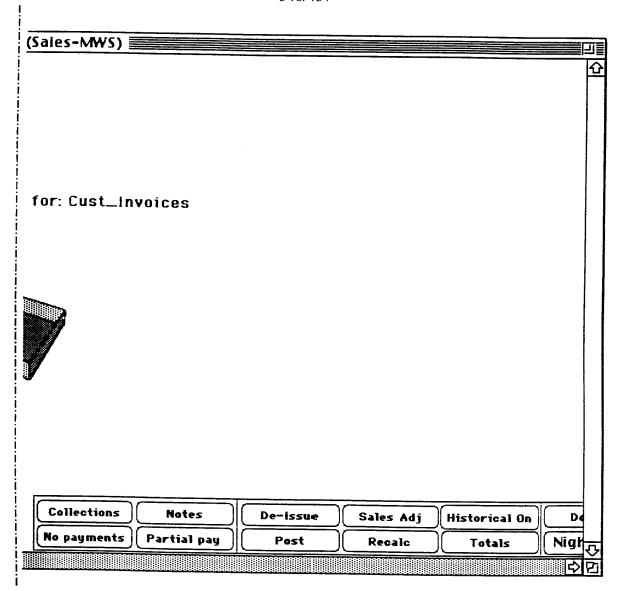
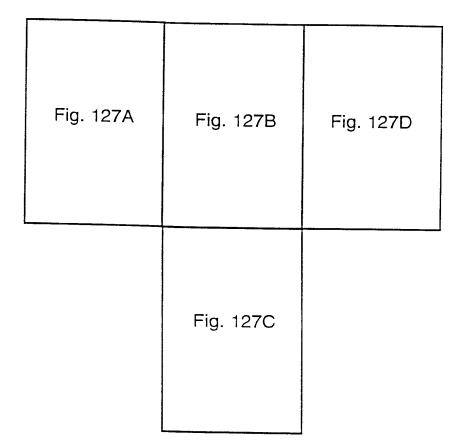


FIG. 126D

Fig 127



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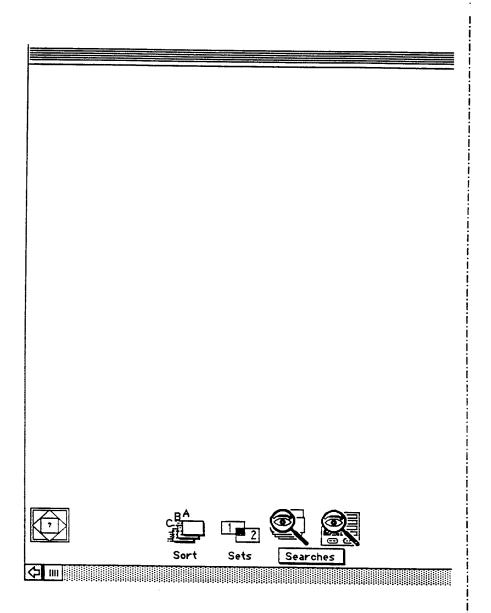
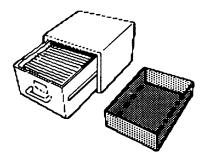


FIG. 127A

### items Sold: 0 of 44942 (Sales-MW

### There are no selected records for: Items Sold



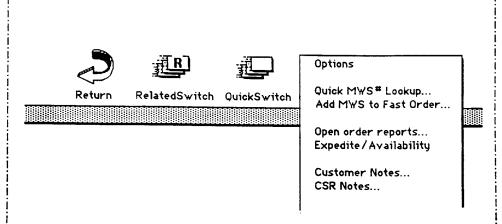


FIG. 127B

Status (restricted)...

Expand to all items sold Remove shipped Check selection again Update MWSs...

Clear updates

Tech Expedite Clear Tech Expedite

Get inHouse not rovd Receive inHouse

Get Installation not royd Receive Installation

FIG. 127C

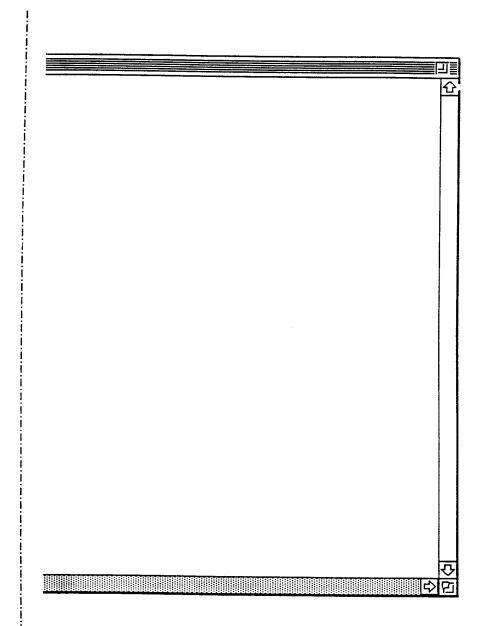


FIG. 127D

Fig 128

Fig. 128A	Fig. 128B	Fig. 128D
	Fig. 128C	

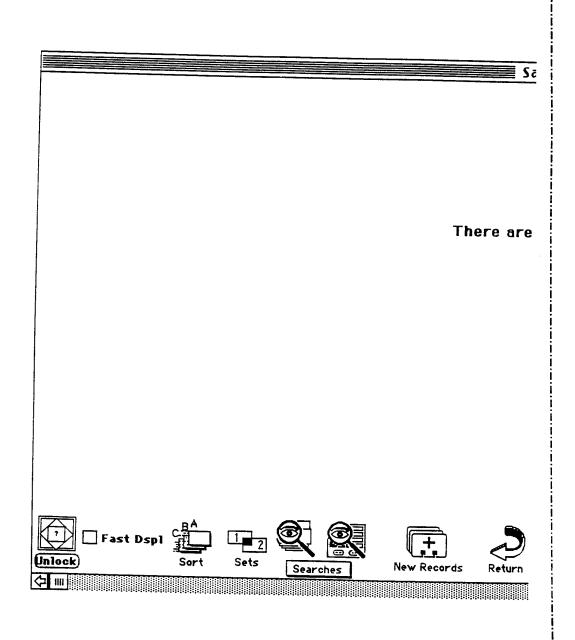


FIG. 128A

# 348/437 iles Records: 0 of 26680 (Sales-MW no selected records for: Sales Records Options Quick MWS # Lookup... Quick Quote # Lookup... Quick PO/RFQ/PID/PRN LU/Conf... PurchChecks... Real World... Update MWSs... Expedite/Availability/Purch Urgent... Not Urgent... RelatedSwitch QuickSwitch Daily PO Confirmation... Get Quotes... Print Quote Confirmation...

FIG. 128B

Apple Status...

Quotes requiring REVIEW Cancel REVIEW

Get purchasing records... Print Purchase summary...

Clear updates

Lock Unlock Get Unlocked

Change TPO to Real PO Get Temporary POs

Get Web Quotes Get PPL Quotes

Get/Create PIDS

Delete protect selection Remove delete protection

Mark selection for deletion Undelete selection

Edit Credit Card Info...

# FIG. 128C

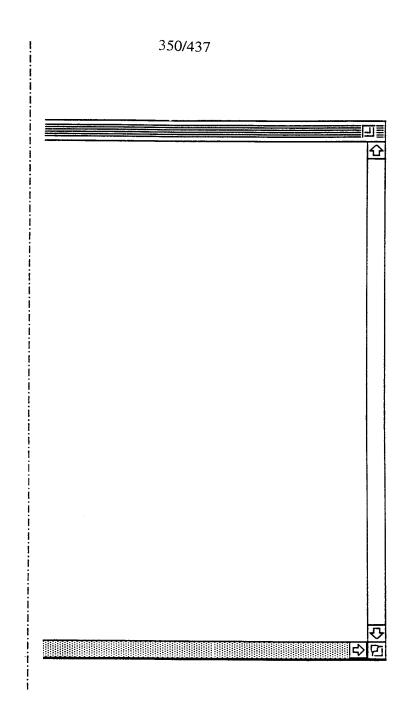


FIG. 128D

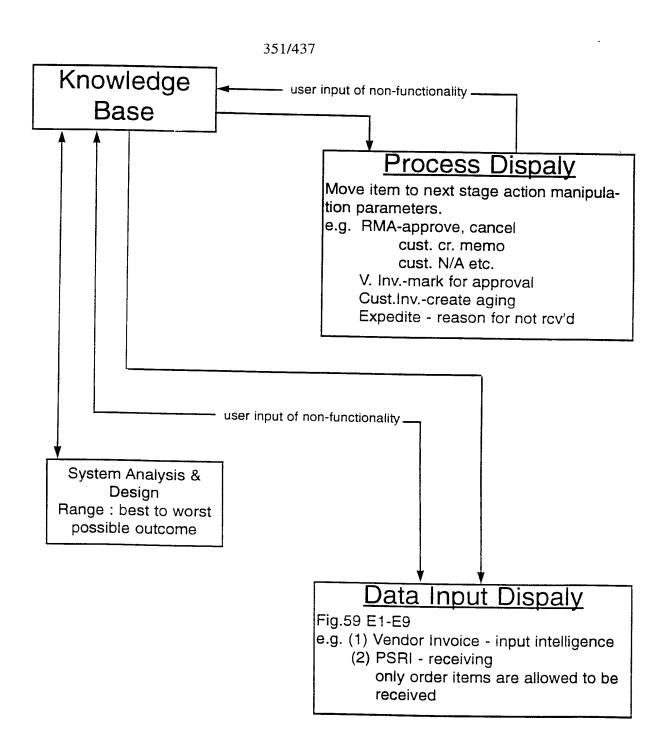


Fig. 129

Home Log Off Show Open RMAs that are Pending for approval by Mega Network Accounting Show Open RMAs that are Approved by Mega Network Reports Reports Tracking Show All Open RMAs Returns/Repair Products

FIG. 130

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FIG. 131

FIG. 131 A

FIG. 131 B

3. 131 A

	Home	
	Log Off	
	Accounting	
	Reports	
	Tracking	
•	Returns/Repair	
	Products	

Open RMA(s) that have been approved by Mega Network

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Replacement PO Number	No Replacement	No Replacement	No Replacement	No Replacement					
Total items Replacements RMA Received Shipped Qty by by by Vendor	0	()	0	()					
Returned items Received by Vendor	0	0	0						
Total RMA Qty	3	3	4	_					
Part Number	42988-65	95187-34	220-0499	16A0194					
Item Description	HP SURESTORE DAT81 INT DDS-2	JAZ IGB EXT SCSI PC/MAC	DELL P6333 GX I/MT+ BASE(66MHZ FSB)W/4MB INTEG VIDEO MEMORY, INTEG	VIRTUAL JETPRINTER SUN SOLARIS CD-R					
Item Manufacturer		DELL	DELL	LEXMARK JETPRINTER INTERNATIONA SUN SOLARIS CD-R					
RMA Type	Credit	Credit	Credit						
Date	11/19/98 Credit	11/19/98 Credit	10/16/98 Credit	09/21/98					
RMA Number	R-321765CR	R-321659CR	R-320721CR	R-319558CR 09/21/98 Credit					

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No Replacement	No Replacement
0	-
0	0
5	
220-0503	241700-001
DELL P6266 GX1/MT BASE (66MHZI:SB) W/4MB INTG VIDEO MEMORY,INTG AUDIO, 512K CACHE	PROLIANT 6500R 6/200 128MB MI-512K NOHD RM FS 16XCD
DELL	
Credit	Lost in transit (COMPAQ (RPL. SERVERS MWS)(CLAIM)
86/10/90	03/30/98
R-311037CR 06/01/98 Credit	R-303978CR 03/30/98 (RPL MWS)

Home Log Off Accounting Reports Tracking Returns/Repair Products

-1G. 131 B

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FIG. 132

FIG. 132 A

FIG. 132 B

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Home	
Accounting Log Off	
Reports A	A(s)
Tracking	l open RM
ucts Returns/Repair	All
Products	

Date	RMA Type	ltem Manufacturer	Irem Description	Part Number	Total RMA Qty	Returned items Received by Vendor	Total items Replacements RMA Received Shipped Qty by by Vendor	Replacement PO Number
11/19/98 Credit	Credit		HP SURESTORE DAT81 INT DDS-2	42988-65	3	0	0	No Replacement
11/19/98 Credit	Credit	DELL	JAZ IGB EXT SCSI PC/MAC	95187-34	3	0	0	No Replacement
10/16/98 Credit	Credit	DELL	DELL P6333 GX.I/MT+ BASE(66MHZ FSB)W/4MB INTEG VIDEO MEMORY,INTEG	220-0499	4	0	0	No Replacement
09/21/98   Credit	Credit	LEXMARK INTERNATIONA	VIRTUAL JETPRINTER SUN SOLARIS CD-R	16A0194	_	_	0	No Replacement

R-320721CR

R-319558CR

R-321765CR

RMA Number

R-321659CR

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No Replacement	No Replacement	
0	I)	
0	0	
S	_	
220-0503	241700-001	
DELL P6266 GX/MT BASE (66MHZI:SB) W/4MB INTG VIDEO MEMORY.INTG AUDIO, 512K CACHE	PROLIANT 6500R 6/200 128MB M1-512K NOHD RM FS 16XCD	
DELL	COMPAQ SERVERS	
Credit	Lost in transit (COMPAQ (RPL. MWS)(CLAIM)	
86/10/90	03/30/98	
R-311037CR 06/01/98 Cr	R-303978CR 03/30/98 (RPL MWS)	

<u>Home</u> Log Off Products Returns/Repair Tracking Reports Accounting

FIG. 132 B

Home Log Off 1998 Accounting 19 Please specify the date range for your shipping report.  $\nabla$ Reports Reset Nov Shipping Reports and: Tracking Submit 1998 Products | Returns/Repair Nov between:

FIG. 133

Log Accounting Reports Tracking Returns/Repair Products

Shipping Summary Report

Home

Off

...if this takes too long please narrow down your range. ...now selecting shipping records between 11/1/98 and 11/10/98. ...now accessing sales records for Southern California Edison.

Total of 37 shipping records found between 11/1/98 and 11/10/98

Show All Details

Previous Screen

FIG. 135

FIG. 135 A
FIG. 135 B
FIG. 135 C
FIG. 135 D
FIG. 135 E

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Log Off Home			Show RMA POD	POD n/a	POD n/a	POD In/a	POD n/a	POD n/a	POD Iva
			Qty S					<u>a</u>	[ K
ng			<del>                                      </del>	∞ ∞		3	12	3	4
Accounting		d 11/10/98.	Part Number	EHN056-0008	KV108A-R2	EHN054-0005	EHN051-0010	SW722A-R3	E4360-0007
Reports	Detail Shipping Reports	37 shipping records found between 11/1/98 and 11/10/98.	Item Description	SERVSELECT TO CPU CABLE 8FT	BLACKBOX SERVSELECT 8-PORT	SERVSWITCH TO KEYB/MTR/MSE 5 FT	SERVSWITCH TO CPU CABLE 10 FT	BLACKBOX SERVSWITCH 4-PORT	4.36GB SCSI ULTRA WIDE 3.5LP 8MS 7200RPM AV ENTERPRISE
ir Tracking	Detail Sh	pping records found	Manufacturer	BLACKBOX	BLACKBOX   S	BLACKBOX   T	BLACKBOX T	BLACKBOX S	West.Digit 3.
Products Returns/Repair		37 ship	PO Number	E1028903-00000001-1301					

FIG. 135 A

į				
	n/a	n/a	ıı/a	n/a
	POD	PQ.	POD	POD
	100	100	100	001
	900-1732	900-1730	430-0118	420-6108
	SELECTCARE, NEXT BUSINESS DAY, ON-SITE SERVICE, 2 YEAT EXTENDED, WANG	SELECTCARE, NEXT BUSINESS DAY ON-SITE SERVICE, INITIAL YEAR, WANG	Active Expansion Riser for GXiM/T Systems, 3 PCI/2 Shared/2 ISA Wake up on Lan	WINDOWS '95 CD ROM, OSR 2.1, FACTORY INSTALL
	DELL	DELL	DELL	DELL
	E1028903-000000001-1298			

### IG. 135 C

	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
POD	POD	POD	POD	POD	POD	POD	POD	POD	POD
001	901	001	100	100	100	001	100	001	100
420-0137	340-0740	340-0701	320-3316	313-0524	311-0515	311-0509	310-2268	310-0038	310-0019
FAT32, FILE SYSTEM, WINDOWS '9X, FACTORY INSTALL	6.4GB IDE HARD DRIVE, GX1, M/T, 350+ MHZ, FACTORY INSTALL	3.5" 1.44MB FLOPPY DRIVE, FACTORY INSTALL	MONITOR OPTION-NONE	14-32X CD ROM, IDE, FACTORY INSTALL	64MB, NON-ECC,SDRAM, 1 DIMM, UPGRADE, GX1, 350+MHZ, FACTORY INSTALL	64MB, NON-ECC, SDRAM, 1 DIMM, 100MHZ, GXI, 350+ MHZ	REDUCED DOCUMENTATION FOR GXaEM/GNL SYSTEMS, FACTORY INSTALL.	PERFORMANCE 104 KEY KEYBOARD FOR WINDOWS 95 FACTORY INSTALL.	MICROSOIT SYSTEM MOUSE
DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL

D n/a	ıD n/a	D n/a	D n/a	D n/a	л/а	O n/a	) n/a
GOA .	POD	POD	GOA	<u>8</u>	POD	<u> </u>	POD
100	30	30	30	30	30	30	30
220-0501	36637-41	310-0039	365-0366	365-0257	360-7371	360-5087	360-4801
DELL P6400GX1/MT+ BASE(100MHZ FSB)W/4MB INTEG VIDEO MEMORY & AUDIO, 512K CACHE	MOUSE MSE SER &PS/2	Performance 104 Key Keyboard for Windows 95. Customer Install	DELL INTEGRATION FEE	DELL PLUS ROUTIN SKU	DELLPLUS SCE CONSIGNED WINDOWS 95 IMAGE FOR THE LATITUDE CP, FACTORY INSTALLED	DP CONSIGNED LABEL SCE	DELL PLUS INFO SKU MANUAL SFTWARE INSTALLATION
DELL	DELL	DELL	DELL	DELL	DELL	DELL	DELL
	E1028903-000000001-1299						

FIG. 135 D

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	7	7/	7	7		7
n/a	n/a	n/a	n/a	n/a	n/a	n/a
POD	- BQ	POD	POD	POD	POD	POD
30	30	30	30	30	30	30
900-1950	420-0541	340-2166	313-0236	311-0342	310-3043	220-0386
Selectcare, Initial Year, Next Business Day On-Site Service Contract, BSC*	WIN95, W/CD all Latitude CP Factory Install	6.4 GB HD, 12.5MM, LATITUDE CP FACTORY INSTALL	20X CD ROM, INTERNAL/EXTERNAL LATITUDE CP FACTORY INSTALL	64MB, IDIMM, EDO, LATITUDE CP FACTORY INSTALLED	No Modem For All Dell Notebook	LATITUDE CP, M233ST, 12.1" SVGA, TFT, FACTORY INSTALLED
DELL	DELL	DELL	DELL	DELL	DELL	DELL

For total of 3 Purchase Orders,

Total of 37 line items shipped between 11/1/98 and 11/10/98.

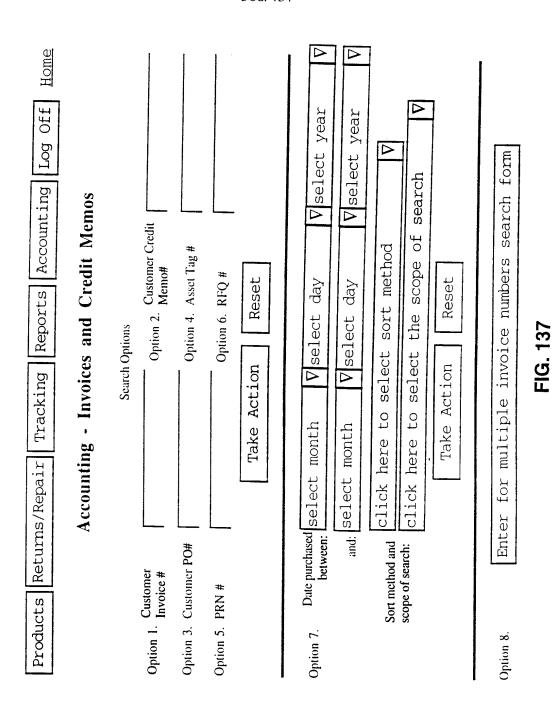
You may use your browser's Back button to return to previous screen.

HOmo	מונים ביי
Ind off	770 607
Accounting	ו
Reports	
Tracking	
Returns/Repair	
Products	

FIG. 135 E

Products Returns/Repair Tracking Reports Accounting Log Off Home	Tracking - Sales Order Status	Get Freight Carrier & Tracking #	The carrier for SERVSELECT TO CPU CABLE 8FT- PO# E1028903-00000001-1301 SERVSELECT TO CPU CABLE 8FT- PO# E1028903-00000001-1301 SERVSELECT TO CPU CABLE 8FT- PO# E1028903-00000001-1301 SERVSELECT TO CPU CABLE 8FT- PO# E1028903-00000001-1301 SERVSELECT TO CPU CABLE 8FT- PO# E1028903-000000001-1301 SERVSELECT TO CPU CABLE 8FT- PO# E1028903-000000001-1301	TO CPU BLE 8FT.
--	-------------------------------	----------------------------------	---	-----------------

-IG. 136



SUBSTITUTE SHEET (RULE 26)

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Home Off Log Accounting Reports Tracking Returns/Repair Products |

Customer Invoices

Invoice D	Invoice PO Date Nu	PO Number	Invoice Type	Status	Status Amount	Paid Amount	Balance	Balance Slip	Check Number	Check Date	Select to See Related Records
17469	86/1/6	E1028903-00000001-1136	Customer	Paid in full	6,825.99	6,825.99	0.00	0.00 See Related Records	1059570 9/29/98	9/29/98	
17470	9/1/68	E1028903-00000001-1199	Customer	Paid in full	3,081.88	3,081.88	00:0	See Related Records	1059570 9/29/98	86/67/6	
17471	86/1/6	E1028903-000000001-1174	Customer	Paid in full	303,668.00 303,668.00	303,668.00	0.00	0.00 See Related Records	1059570 9/29/98	9/29/98	
17484	9/2/68	E1028903-00000001-1207	Customer	Paid in full	113.66	113.66	0.00	0.00 See Related Records	1063421	86/9/01	
17490	86/2/6	E1028903-00000001-1208	Customer	Paid in full	820.54	820.54	0.00	0.00 See Related Records	1063421	86/9/01	
1.7495	9/4/98	E1028903-00000001-0492	Customer	Paid in full	92.60	92.60	0.00	17495	1067082	10/15/98	

Show Related Records for ckecked Item R

Reset

FIG. 138

FIG. 139

FIG. 139 A
FIG. 139 B
FIG. 139 C
FIG. 139 D

# MEGA NETWORK INVOICE

785 Palomar Avenue, Sunnyvale, CA 94086 Phone (408) 730-9138 \* Fax (408) 720-1293

Customer September 1, 1998

							•		
For:	SOUT	HERN	SOUTHERN CALIFORNIA	EDISON					
PO	Num:		E1028903-000000001-1136	.1136		RFQ: 1136	RFQ: 1136 PRN: 105004		
Conta	ct: Cl	Contact: CRAIG V	WILSON (626) 302-6388	302-6388		Fax: (626	Fax: (626) 302-4048		
Bill To:	SOU7 2244 Rosei Att: A	SOUTHERN CALIFG 2244 WALNUT GRC Rosemead, CA 91770 Att: ACCOUNTS PA	SOUTHERN CALIFORNIA EDISON 2244 WALNUT GROVE AVE., RM#210 Rosemead, CA 91770 Att: ACCOUNTS PAYABLE	DISON , RM#210	Ship To:	SOUTHERN CALIFOR 501 S. MARENGO ST BLDG D, SMART#105 Alhambra, CA 91803 Att: BANCTEC	SOUTHERN CALIFORNIA EDISON 501 S. MARENGO ST BLDG D, SMART#105004 Alhambra, CA 91803 Att: BANCTEC	A EDISON	
Sales	Person	_	Order Date	Ship Via	Terms				
Charles			August 6, 1998	Ground	N30				
Oty Ord	Unit	Oty Ship'd	Description				Part Number	Unit Price	Extended Price
12		12	RACK 7142 42U (7FT) W/DOOR	U (7FT) W/D	OOOR		165753-001	1,460.55	17,526.60
12		12	SIDEWALL KIT (LEFT/RIGHT) 7142 42U COMPAQ RACK	T (LEFT/RIC	3HT) 7142 421		165652-001	194.50	2,334.00
_	each		COMPAQ RACK 7122	K 7122			163747-001	1,615.53	1,615.53
3	cach	3	COMPAQ PROLIANT 850R 6/200H: MODELI (HP MODEL)	LIANT 850R	k 6/200H: MO	DELI (HP	167200-001	2,531.62	7,594.86
2	cach	2	PROLIANT 1600T 6/300	10T 6/300			333550-001	2,434.25	4,868.50
_	each		PROLIANT 3000 6/333 P2-333 512K 64MB MODEL	XO 6/333 P2-3	33 512K 64N	IB MODEL	179740-001	4.182.92	4.182.92

## FIG. 139 A

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18,416.84	55.12	27,556.78	3.00	3,555.48	2,300.60	4.09	0.97	8.10	6.44	7.16	1.94	5.24
18,4	212,865.12	<u> </u>	87,633.00	3,55	2.30	44,904.09	124,400.97	11,678.10	10,666.44	3,137.16	57,881.94	3,915.24
4,604.21	11,825.84	13,778.39	1,460.55	888.87	1,150.30	583.17	1,011.39	1,946.35	1,777.74	522.86	1,702.41	652.54
179750-001	241700-001	273350-005	169470-B21	298047-B21	333555-B21	272577-001	313706-B21	313756-B21	304100-B21	224206-001	295242-B21	225484-001
PROLIANT 3000R 6/333 P2-333 512K 64MB MODEL 1	PROLIANT 6500 6/200 128MB M1-512K NOHD RM FS 16XCD	PROLIANT 7000 6/200-512: MODEL 1S-128 (128 MB)	6/200 512K PROC OPT KIT PROLIANT 6500 7000	6/300 PENTIUM II 512K PROCESSOR OPTION KIT	PROLIANT 3000 6/333 512K UPGRADE KIT	4.3GB PLUGGABLE W/ULTRA 1.0IN 7200RPM SCSI-3 HD	9.1GB PLUGGABLE W/ULTRA 1.0IN SCSI-3 7200RPM HD	18.20GB PLUGGABLE WIDE-ULTRA SCSI3 DRIVE (1.6")	PROLIANT STORAGE SYS /UI RM SINGLE BUS	REDUN P/S KIT PROLIANT STORAGE/F	SMART-2DH PCI 2CH ARRAY CONTROLLER W/16MB CACHE	128MB EDO MEM EXPANSION KIT (1 X 128MB, 60 NS)
4	81	2	09	4	2	77	123	9	9	9	34	9
each		each		each	each			each				each
4	81	2	09	4	2	77	123	9	9	9	34	9

FIG. 139 B

2		2	256MB DIMM 60NS BUFFERED ECC EDO 2500 PROLIANT	271910-001	1,388.72	2,777.44
5		5	512MB KIT (4X128MB DIMMS) 60NS EDO ECC PROLIANT	241773-B21	2,587.11	12,935.55
3	each	3	512 MB MEM EXPANSION KIT (4 X 128 MB FP DIMMS)	219285-001	2,778.50	8,335.50
14		14	MULTISCAN V55 15IN 13.7VIS .28MM 10X7 COLMON	308006-001	223.78	3,132.92
13		13	RACK INTERNAL TRACKBALL KEYBOARD RM	185152-001	152.67	1.984.71
32		32	RM 9 FOOT CPU TO SWITCH CABLE KIT (backorder on part# 165638-002 20 ft cable)	165638-001	67.97	2,175.04
12		12	RM 4PT KYBD MON MOUSE SWBX 1U	242694-001	888.87	10,666.44
13		13	RACK MONITOR / UTILITY SHELF KIT	303606-B21	103.52	1 345 76
13		13	RACK KEYBOARD DRAWER SHELF KIT	303607-B21	261.43	3.398.59
19	each	19	COMPAQ REMOTE INSIGHT BOARD/PCI	294013-001	759.07	14,422.33
26		26	MOLPA NT SVR V4.0 WNT IS UNITS	227-00367	579.32	15,062.32
2		2	35/70GB DLT DRIVE INT BARE TD SCSI-3 I/F	242520-B21	5,214.01	10,428.02
2	cach	2	DLT 35/70 TAPE CARTRIDGES (7-PACK)	295192-B21	611.75	1,223.50
_	each		FIBER CHANNEL ARRAY KIT	223100-001	6,305.76	6,305.76
	each		FIBER CHANNEL STORAGE HUB 7	234453-001	1,019.58	1,019.58
	1					

FIG. 139 C

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_	Ŀ					
	each		FIBER CHANNEL HOST CONTROLLER KIT/P	223180-B21	1,673,17	1 673 17
4	each	4	HOT-PLUG DRIVE CAGE (5 X I) OPTION KIT	271912-001	156.86	<u> </u>
2	each	2	COMPAO TOWER TO RACK CONVERSION KIT	140069 001	09:00	
			IW HOTOX	100-000241	418.28	836.56
	each		RACK-MOUNTABLE UPS MODEL R1500	242704-001	962.07	962.07
13		13	512MB KIT (4X128MB DIMMS) 60NS EDO ECC PROLIANT	241773-B21	2,587.11	33,
13	each	13	256 MB MEM KIT (2 X 128 MB BUFFERED EDO DIMMS)	149026-B21	1,342.72	17,455 36
[12	cach	112	COMPAQ REMOTE INSIGHT BOARD/PCI	294013-001	759.07	9,108.84
Comments	ents				Sale Amount	6,305.76
					Tax@	520.23
					Installation	
					Freight	
					Balance Due	6,825.99

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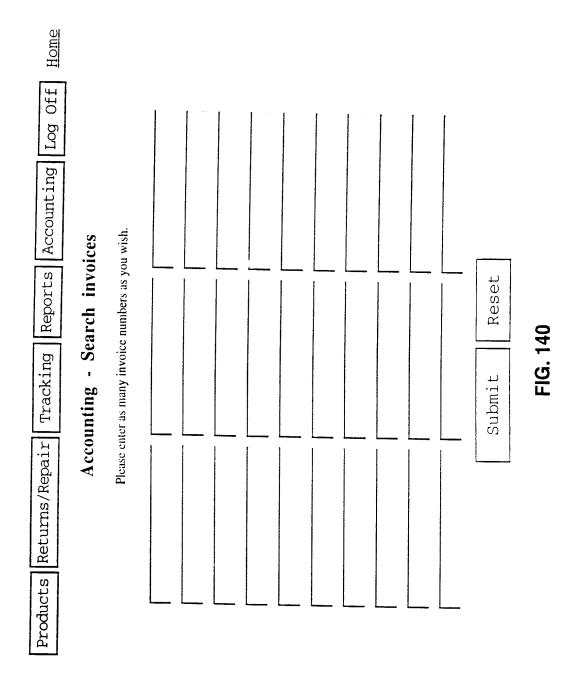


FIG. 141

FIG. 141A	FIG. 141B
FIG. 141 C	FIG. 141 D

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Invoice-Date-Term-Type Customer	erm-Type		* Customer PO MYS /qty- Total PO- Invoiced	/qty- Tot	al PO- Invoiced
17123		UNION BANK OF CALIFORNIA	.−86M	M98-28010	6310013255
7/15/98	NIO	N10 Loraine (213	(213) 720-2961 604.40		
Addendum		(213) 720-2983 mi	6310013255		
Printed	STxPaid	(CP: Prixe) 9/21/98	red all the item		od to
7094		UNION BANK OF CALIFORNIA	M98-28010	28010	6310013255
7/14/98	O I	N10 Loraine (213	(213) 720-2961 604.40		459.35
Addendum		20-2983 mi	55		
Printed	STxPaid	9/21/98, to item left on po			
17398		UNION BANK OF CALIFORNIA	M98-28263	28263	6310013400
8/13/38	N30	N30 Loraine (213) 720-2961			520.03
Replacement		20-29 <b>83</b> mi	7-0		
Printed	STxPaid	R-318314RP (Temp2E	Get		
17651		UNION BANK OF CALIFORNIA			
10/12/98	OIN	N10 Loraine (21			•
Customer		(213) 720-2983 mi	Ticklers		
Printed					
17636	)   	UNION BANK OF CALIFORNIA			-
10/8/98	NOIN	N10 Loraine (21			
Addendum		(213) 720-2983 mi			•
Printed					
17654		UNION BANK OF CALIFORNIA	- Court		7.0
10/12/98	N10 Loraine	or aine (21	רמוורהו		UK
Customer	<u> </u>	20-2983 mi			
7.7.0				***************************************	***************************************

FIG. 141 A

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Open         Age: 141 26.43           459.35         90 33.92           90 33.92         36.59           520.03         90 36.59           10/6/99, do not have invoice, need to fax if R-315879XSM / Temp27849-1 10/22/98, Item is not on poor           Open         Age: 51 383.30           11,113.50         30 750.20           Open         30 750.20           5,322.40         30 366.19
366.19

iG. 141 B

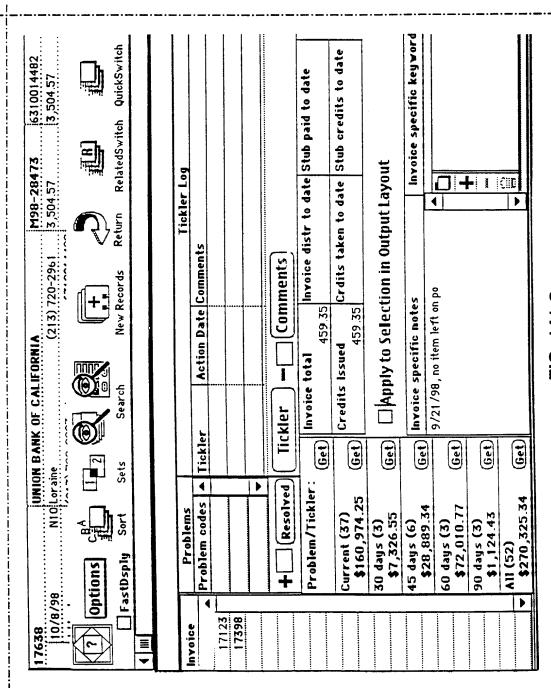
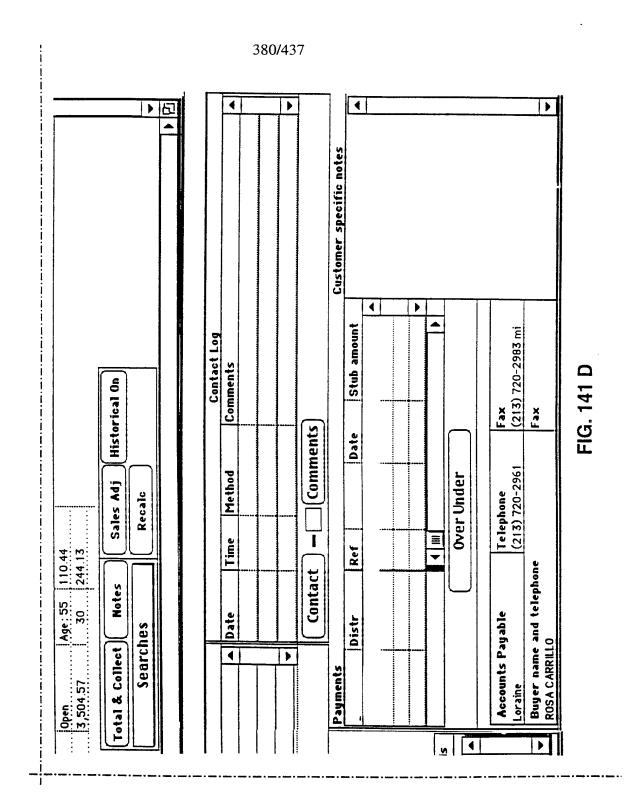


FIG. 141 C



SUBSTITUTE SHEET (RULE 26)

FIG.142

FIG. 142 A	FIG. 142 B
FIG. 142 C	FIG. 142 D

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Invoice-Date-T	e-Term-Type Customer	Customer	¥ Customer PO	MWS /qty- To	* Customer PO MWS /qty- TotalPO- Invoiced
17123		UNION BANK OF CALIFORNIA		M98-28010	6310013255
1/15/98	N10	N10Loraine	(213) 720-2961	604.40	145.05
Addendum		(213) 720-2983 mi	6310013255		
Printed	STxPaid	(CP: Price)	(CP: Price) 9/21/98, used all the item on po	m on po	
17094		UNION BANK OF CALIFORNIA	IRNIA	M98-28010	6310013255
7/14/98	O.N.	N10 Loraine	(213) 720-2961	604.40	459.35
Addendum		(213) 720-2983 mi	6310013255		
Printed	STxPaid	9/21/98,12	9/21/98, no item left on po		
17398		UNION BANK OF CALIFORNI	RNIA	M98-28263	6310013400
8/13/38	N30	N30 Loraine	(213) 720-2961	520.03	520.03
Replacement		(213) 720-2983 mi	6310013400		
Printed	STxPaid	R-318314RP (	R-318314RP (Temp28263-1) Approved: 8/24/98 R-315879XSM (Temp27849-1)	:8/24/98 R-315	879XSM (Temo27849-
17651		UNION BANK OF CALIFORNIA	RNIA	M98-28466	6310014479
10/12/98	N	O Loraine	213) 720-2961	11,113,50	11 113 50
Customer		(213) 720-2983 mi	479		
Printed					
17636	)	UNION BANK OF CALIFORNIA	RNIA	M98-28472	6310014479
10/8/98	N	N10 Loraine	213) 720-2961	5.322.40	5 322 40
Addendum		(213) 720-2983 mi	479		
Printed					
17654		UNION BANK OF CALIFORNIA		M98-28471	6310014482
10/12/98	O N	N10:Loraine	213) 720-2961	4,455.22	4.455.22
Customer		(213) 720-2983 mi	1482		
Printed	•••			***************************************	***************************************

FIG. 142 A

FIG. 142 B

	4	ana (				
	Frt-Tx-RMA Credit summary			Open       Age: 105       39         520.03       90       36.59         10/6/98, do mot have invoke, need to fax it R-315879XSM / Temp27849-1 10/22/98, item is not on polyen         10,6/98, do mot have invoke, need to fax it R-315879XSM / Temp27849-1 10/22/98, item is not on polyen         10,113.50       30       750.20		
	Frt-Tx-RM	8.34 10.71	26.43 33.92	39.90 36.59 <i>roke, need to t</i> 383.30 750.20	165.21 366.19	152.36 300.86
les-MI	Age	Age: 140 8.34 90 10.71	Age: 141 26.43 90 33.92	Age: 105 33 90 90 36.59 mot have invoke, ned Age: 51 383.30 30 750.20	Age: 55 30	Age: 51 30
16977 (Sales-MIL	Left to pay	Open Age: 140 B 34	Open Age: 14	Open     Age: 105     39.90       520.03     90     36.59       10/6/98, do nothave invoice, need to 10pen     Age: 51     383.30       11,113.50     30     750.20	Open Age: 55 5,322.40 30	Open 4,455.22

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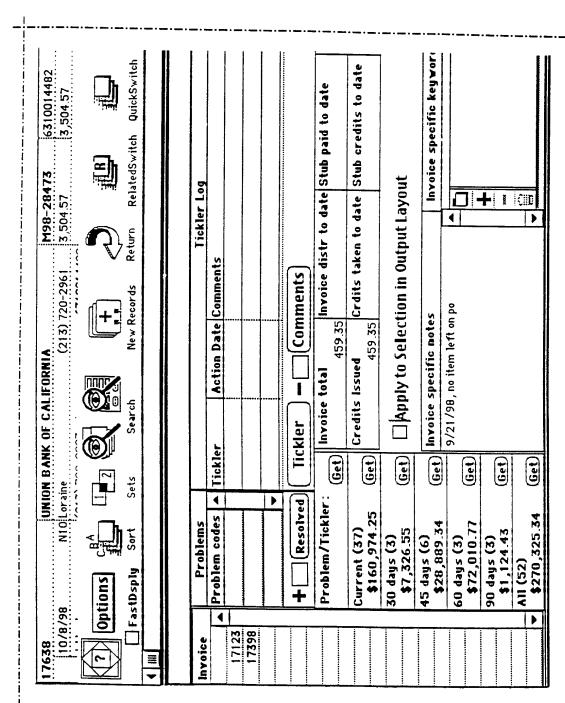
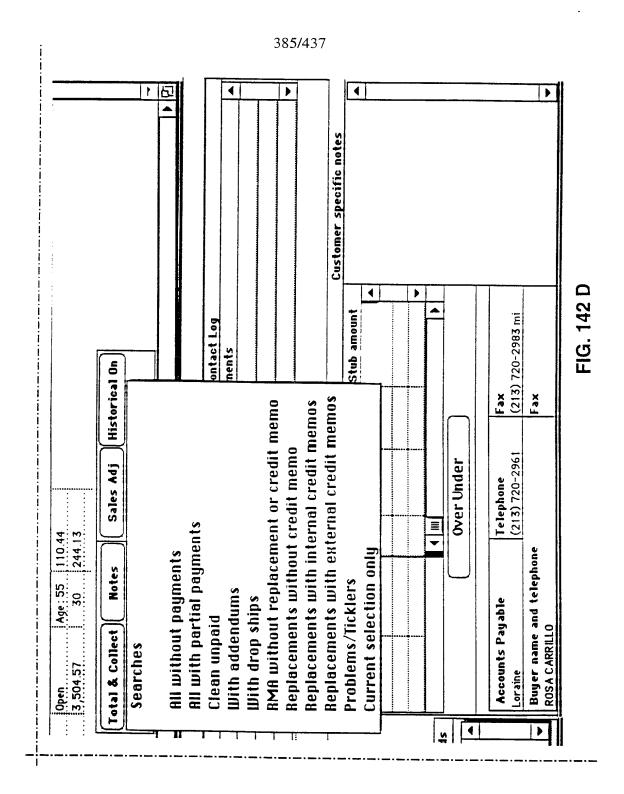


FIG. 142 C



SUBSTITUTE SHEET (RULE 26)

FIG. 143

FIG. 143 A	FIG. 143 B
FIG. 143 C	FIG. 143 D

Invoice-Date-Term-Type Customer	erm-Type	Customer	# Customer PO	* Customer PO  MWS /qty- Total PO- Invoiced	"S /qty- TotalPO- Invoiced	ì
17123		UNION BANK OF CALIFORNIA	1 :	M98-28010	6310013255	
7/15/98	N10	N10Loraine	(213) 720-2961	604 40	145.05	:
Addendum		20-2983 mi	6310013255			
Printed	STxPaid	بكو	9/21/98, used all the item on po		***************************************	
17094		UNION BANK OF CALIFORNIA	4	M98-28010	6310013255	
7/14/98	NO	N10 Loraine	(213) 720-2961	604.40	459.35	:
Addendum		983 mi	6310013255	: 		:
Printed	STxPaid	9/21/98, to item left on po	n left on po			
17398		UNION BANK OF CALIFORNIA	~	M98-28263	6310013400	
8/61/8	N30	N30 Loraine	(21)			F
Replacement		20-2983 mi	Select			<u>.                                    </u>
Printed	STxPaid	R-318314RP (Temp28)	_			
17651		UNION BANK OF CALIFORNIA	A CHOICES			11
10/12/98	N	NIOLoraine	(21) Cancelled	Cancelled PO	1 - 1	<u>:</u>
Customer		/20-2983 mi	DoubleShip	Double shipment	111	☱
Printed	•		Ext Credit	External credit memo exists	no exists	<u> </u>
17636	) — —	UNION BANK OF CALIFORNIA		Freight discrepancy		1
10/8/98	Ö	N10Loraine	215 POD	internal credit memo exists Proof of Daliverii	o exists	
Addendum		(213) 720-2983 mi	PONUM	Invalid PO number	•	:
Printed						<u>:                                    </u>
17654		UNION BANK OF CALIFORNIA			70	Щ_
10/12/98	N 0	N10 Loraine	(21)		NO.	
Customer		(213) 720-2983 mi				_
Printed						

FIG. 143 A

**◆** , do nothave invoice, need to lax it R-315879XSM / Temp27849-i 10/22/98, item is not on po Frt-Tx-RMA Credit summary 383.30 750.20 39.90 36.59 152.36 300.86 ' 16977 (Sales-MIL 26.43 33.92 165.21 10.71 Age: 140 Age: 105 Age: 51 30 Left to pay 10/6/98 11,113.50 Open 5,322.40 Open 145.05 459.35 520.03 Open

FIG. 143 B

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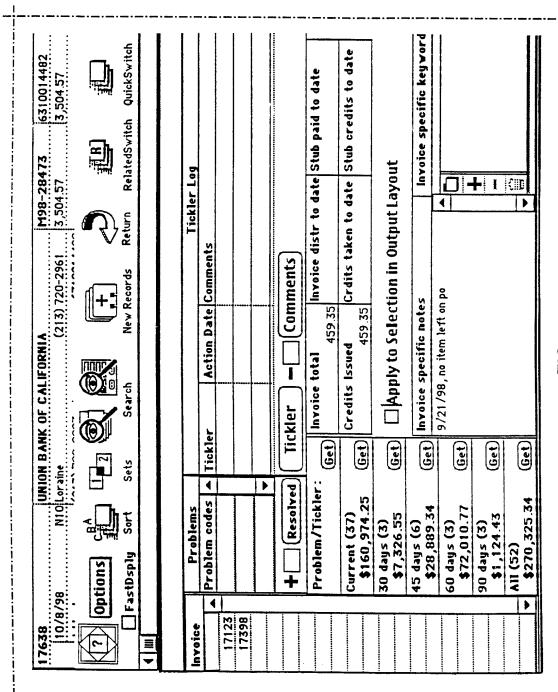
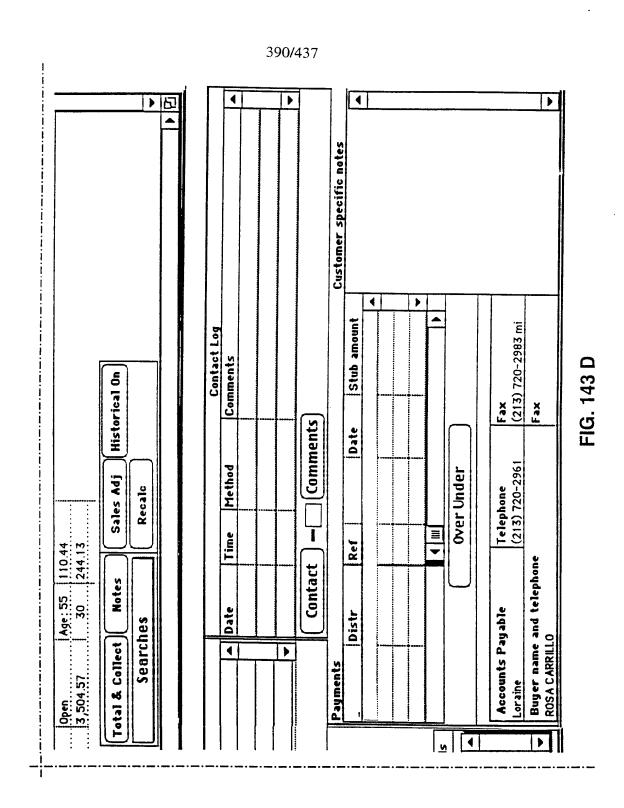


FIG. 143 C



SUBSTITUTE SHEET (RULE 26)

FIG. 144

FIG. 144 A	FIG. 144 B
FIG. 144 C	FIG. 144 D

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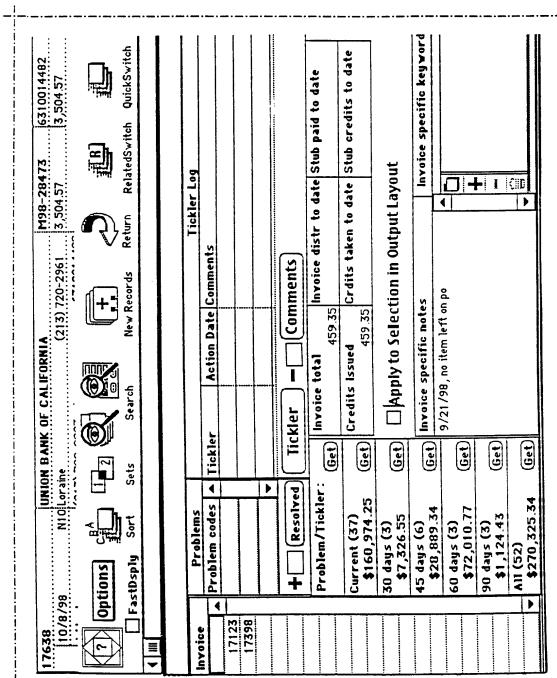
# Customer PO MWS /qty TotalPD- Invoiced
M98-28010 6310013255
:
(CP: Prixe) 9/21/98, used all the item on po
M98-28010 6310013255
255
1
(21,31,220-2961   520.03
Select
Choices
4
Ų
Cust Will Call Date customer promised to call
Email Customer requests email
Administration of the party of
Calicei

FIG. 144 A

FIG. 144 B

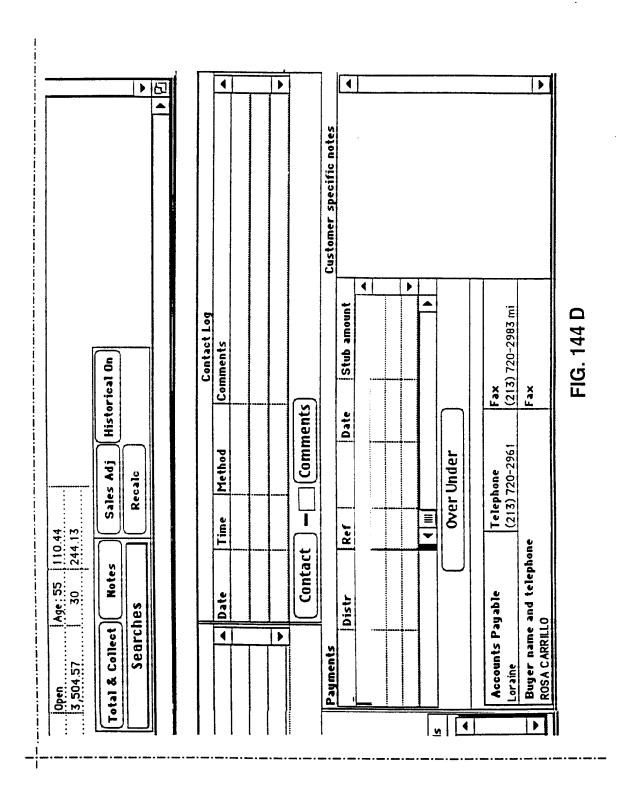
Left to pay	Age	Frt-Tx-RMA Credit summary
Open 145.05	Age: 140 8.34	Open Age: 140 B.34 ≡
Open 459.35	Age: 141 90	Open   Age: 141 26.43 459.35   90 33.92
S20.03	Open     Age: 105 39:90       520.03     90 36.59       10/6/98 do not bave invoice. In	220.03   Age: 105   39.90   36.59   36.59   10/22/98 item is not on an in the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an in the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an in the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an in the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an in the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on an incidence of the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on a constant to the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on a constant to the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on a constant to the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on a constant to the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on a constant to the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on a constant to the second to fax it R-315879XSM / Temo27849-1 10/22/98 item is not on a constant to the second to the second to the second to the second to the second to the second to the second to the second to
Open 11,113.50	Age: 51 383.30 30 750.20	383.30 750.20
Open 5,322.40	Age: 55	Open Age: 55   165.21 5,322.40 30 366.19
Open   Age : 51 4,455.22   30	Age: 51 30	152.36 300.86

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<sup>=</sup>1G. 144 C

WO 99/33016



SUBSTITUTE SHEET (RULE 26)

FIG. 145

FIG. 145 A FIG. 145 B	FIG. 145 C	FIG. 145 D
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MYS date	Mega PO	Cust Name/PO	*Term-BTO	Item Sold Description / Mfr
10/2/97 M97-25641	NoP	UNION BANK OF C 6310009524	ALIFORNIA N10	VECTRA VL5 DT 5/166 MMX 16ME HP PC'S
1/8/97 M97-24289	NoP	ORACLE 230419	N45	TRNSCVR MICRO MOD 1085
00/00/00 M96-21656	NoP			APEX 4.6GB PC1 INT 5.25HH SCS12 PINNACLE MICRO
00/00/00 M96-21656	NoP			OMDR 4.6GB OPTL MED REWRITABL PINNACLE
1/8/97 M97-24287	NoP	Goldman, Sachs SO108C820	N30	PC-TRAC PS/2 TRACKBALL MICROSPEED INC.
00/00/00 M96-22125	NoP			RECORD ABLE BLANK CD 650MB 4X SONY CORPORATION OF AMERICA
1/8/97 M97-24288	NoP	PACIFIC BELL BAY AJOEN95	Y UNIT N10	LASERJET TONER 4 4M 4PLUS 4M F HP PRINTERS
1/8/97 M97-24289	NoP	ORACLE 230419	N45	8-PORT 10BT ETH HUB DIGI
00/00/00 M96-22758	NoP			CDQ-74SZ RECORDABLE10-PK SILK SONY MEDIA
00/00/00 M96-22875	NoP			LS-120 DRIVE 3.5HH 120MB READ/ COMP AQ COMPUTER CORPORATION
00/00/00 M96-23636	NoP		; ;	LASERJET 5SI 5SIMX TONER CARTE HP PRINTERS
00/00/00 M96-23639	NoP			DLT COMPACTAPE HIXT 30GB 7PK ADIC
00/00/00 M96-23704	NoP			EZ135 135MB CARTRIDGE SNGL PK SYQUEST
1 1111				

FIG. 145 A

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Qty	Sprice	₩eight/ETA	Scost /	Peost	Vendo	r/Conf
500 24XCD WFW W			1,229.00			
1			1,		·	
**************************************			44.28			
1						055172
MB 17MS W/SCSII	***************************************		1,434.07	'	TECHD	ATA
11			1,			
•••••			162.05		Merise	ì
2				138.00		055826
······································	***************************************		66.14		MicroD	)
2						50-811
74 MINUTES	***************************************		6.76		MicroD	)
20				5.85		
S YIELD-6800 PAG	***************************************		89.00	************	Merise	]
:2				89.00		0551721
	•••••	***************************************	204.12			
<u> </u>						0551721
REEN COMPATIBLE	••••••		59.36		TECHD	ATA
:1						559182
ITEABLE TO 1.44MB	***************************************		194.87	•••••	MicroD	•
:1						840032
E	***************************************		157.21			
<u> </u>						559182
4	***************************************		295.54	••••••	TECHD	ATA
30 0101/ 0155 555						738406
RD DISK CART FOR	*******************************	•••••	19.00	•••••	TECHD	ATA
10				17.30		559182

FIG. 145 B

Mfr / Vendor(PN)	Lprice/Lcost	Rebate
D4594B#ABA	•	Test
27809		
MIL4340M	•	Test
62704		
APEX4.6GBPCI		Test
630172		
OMDR 4.6 GB		Test
79769		
PD-250		Test
256226		<del>!</del>
CDQ-74A		Test
314732	***************************************	***************************************
92298A		Test
10901	•••••••••••••••••	***************************************
1IL4710H		Test
2223	••••••••••••••••••••••••••••••••••••••	
DQ-74SZ		Test
303339	••••••	
85061-001		Test
37119	***************************************	
3909 A		Test
346065	***************************************	1 ~ D \
39-1050-11	<u> </u>	Test
)48 <b>4</b> 00	•••••	1 5 3 \
107793/SQ135		Test
		142/

FIG. 145 C

		트 브
Special	Pcomments	
************************	»CustRetType: Lost in transit	]
		_
		.]
		_
		-
***************************************		·
	TTA AS COOK AS DOCCIDES	<u> </u> 
***************************************	ETA: AS SOON AS POSSIBLE:	1
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		<u> </u>
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		╛
***************************************		.
		╛

FIG. 145 D

FIG. 146

FIG. 146 A	FIG. 146 B	FIG. 146 C
------------	------------	------------

MYS date	Mega PO	Cust Name/PO *	Term-BTO	Item sold Description /
10/2/97	***************************************	UNION BANK OF CA		VECTRA VL5 DT 5/166 MMX
M97-25641	NoP	6310009524	N10	HP PC'S
1/8/97		ORACLE		TRNSCVR MICRO MOD 1085
M97-24289	NoP	230419	N45	DIGI
00/00/00		***************************************		APEX 4.6GB PCI INT 5.25HH
M96-21656	NoP			PINNACLE MICRO
00/00/00		•		OMDR 4.6GB OPTL MED REWE
M96-21656	NoP			PINNACLE
1/8/97		Goldman, Sachs		PC-TRAC PS/2 TRACKBALL
M97-24287	NoP	S0108C820	N30	MICROSPEED INC.
00/00/00	******			RECORD ABLE BLANK CD 650
M96-22125	N₀P			SONY CORPORATION OF AME
1/8/97	•••••	PACIFIC BELL BAY	UNIT	LASERJET TONER 4 4M 4PLU
M97-24288	NoP	AJOEN95	N10	HP PRINTERS
1/8/97		ORACLE		8-PORT 10BT ETH HUB
M97-24289	NoP	230419	N45	DIGI
00/00/00				CDQ-74SZ RECORD ABLE 10-F
M96-22758	NoP			SONY MEDIA
00/00/00		•		LS-120 DRIVE 3.5HH 120MB
M96-22875	NoP			COMPAQ COMPUTER CORPOR
00/00/00	•••••			LASERJET 5SI 5SIMX TONER
M96-23636	NoP			HP PRINTERS
00/00/00				DLT COMPACTAPE HIXT 30G
M96-23639	NoP			ADIC
00/00/00	•••••			EZ135 135MB CARTRIDGE SI
<b>M96-</b> 23704	NoP			SYQUEST

FIG. 146 A

lfr Qty	Order/ETA	Epd ETA/Status	<b>Epd Condition</b>
6MB M2500 24XCD WFW	10/2/97	6/17/98	
		Back order	
***************************************	1/8/97		
1			
CS12 4.5MB 17MS W/SCS	1/21/97		
1			
TABLE	2/3/97		
2			
······································	1/9/97		
2			
3 4X 1PK 74 MINUTES	2/10/97		
20			
4M PLUS YIELD-6800 P	1/8/97		
2			
	1/8/97		
1			
SILK SCREEN COMPATIBL	8/15/96		
1			
EAD/WRITEABLE TO 1.44	1/8/97		
1			
ARTRIDGE	1/21/97		
1			
7PK	10/8/96		
1		Open source complet	e
L PK HARD DISK CART FO	1/21/97		
10			***************************************

FIG. 146 B

Més /Vandos D	N Vendor/Conf		
D4594B#ABA	Merisel	Ecomments	_
27809	6123589		
MIL4340M	Merisel		
62704	05517214		
APEX4.6GBPC1	TECHDATA		
630172	8791827		
OMDR 4.6 GB	Merisel		
79769	05582632		·····
PD-250	MicroD		
256226	50-81179		<del></del>
CDQ-74A	MicroD		
314732			
92298A	Merisel		
40901	05517214		
MIL4710H	Merisel		
02223	05517214		
CDQ-74SZ	TECHDATA		<b>=</b>
803339	5591827		
185061-001	MicroD		7
437119	8400326		[
C3909A	TECHDATA		Ħ
546065	5591827	•	
39-1050-11	TECHDATA		7
048400	7384066		
S107793/SQ135	TECHDATA		7
7 <b>893</b> 69	5591827	······•	·····{

FIG. 146 C

FIG. 147

FIG. 147 A FIG. 147 B FIG. 147
--------------------------------

MWS date	Mega f	PO Cust Name/PO	*Term-BTO
10/2/97		UNION BANK OF (	
M97-25641	NoP	6310009524	N10
1/8/97		ORACLE	
M97-24289	NoP	230419	N45
00/00/00			
M96-21656	NoP		
00/00/00			
M96-21656	NoP		
1/8/97		Goldman, Sachs	
M97-24287	NoP	S0108C820	N30
00/00/00			
M96-22125	NoP		
1/8/97		PACIFIC BELL BA	Y UNIT
M97-24288	NoP	AJOEN95	N10
1/8/97		ORACLE	
M97-24289	NoP	230419	N45
00/00/00			
M96-22758	NoP		
00/00/00	··•		
M96-22875	NoP		
00/00/00			
M96-23636	NoP		
00/00/00	···•		
M96-23639	NoP		
00/00/00	··········		
M96-23704	NoP		
1			

FIG. 147 A

Item sold Description		
VECTRA VL5 DT 5/166 MM	X 16MB M2500 24XCD WF	W W 10/2/97
HP PC'S	<u> </u>	
TRNSCVR MICRO MOD 1085		1/8/97
DIGI	1	
APEX 4.6GB PCI INT 5.25HH	SCS12 4.5MB 17MS W/SC	SII 1/21/97
PINNACLE MICRO	1	
OMDR 4.6GB OPTL MED REW	RITABLE	2/3/97
PINNACLE	2	
PC-TRAC PS/2 TRACKBALL		1/9/97
MICROSPEED INC.	2	
RECORD ABLE BLANK CD 650	MB 4X 1PK 74 MINUTES	2/10/97
SONY CORPORATION OF AME	R 20	
ASERJET TONER 4 4M 4PLU	JS 4M PLUS YIELD-6800 F	AG 1/8/97
IP PRINTERS	2	
3-PORT 10BT ETH HUB		1/8/97
)IGI	1	
DQ-74SZ RECORD ABLE10-F	K SILK SCREEN COMPATIB	LE 8/15/96
ONY MEDIA	1	
S-120 DRIVE 3.5HH 120MB	READ/WRITEABLE TO 1.4	4M 1/8/97
OMP AQ COMPUTER CORPOR	1	
ASERJET 5SI 5SIMX TONER	CARTRIDGE	1/21/97
P PRINTERS	1	
LT COMPACTAPE HIXT 30G	B 7PK	10/8/96
ADIC	1	
Z135 135MB CARTRIDGE SI	NGL PK HARD DISK CART F	OR 1/21/97
YQUEST	10	

FIG. 147 B

Mfr/Vendor P	N Vendor/Conf	Receive Condition / Roomments	
D4594B#ABA	Merisel	, Roomments	Ì
27809	6123589		
MIL4340M	Merisel		
62704	05517214		ı
APEX4.6GBPCI	TECHDATA		
630172	8791827		ĺ
OMDR 4.6 GB	Merisel		
79769	05582632		ı
PD-250	MicroD		
256226	50-81179		١
CDQ-74A	MicroD		١
314732			
92298A	Merisel		
40901	05517214		1
MIL4710H	Merisel		
02223	05517214		
CDQ-74SZ	TECHDATA		l
803339	5591827		
185061-001	MicroD		1
437119	8400326		
C3909A	TECHDATA		1
546065	5591827		
39-1050-11	TECHDATA		
048400	7384066		
S107793/SQ135	TECHDATA		
78 <b>93</b> 69	5591827		ŀ

FIG. 147 C

FIG. 148

FIG. 148 A	FIG. 148 B	FIG. 148 C
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M <b>Y</b> S date	Mega PO	Cust Name/PO	*Term-BTO
10/2/97	****	UNION BANK OF C	ALIFORNIA
M97-25641	NoP	6310009524	N10
1/8/97		ORACLE	
M97-24289	NoP	230419	N45
00/00/00			
M96-21656	NoP		
00/00/00			
M96-21656	NoP		
1/8/97		Goldman, Sachs	
M97-24287	NoP	S0108C820	N30
00/00/00			
M96-22125	NoP		
1/8/97		PACIFIC BELL BA	Y UNIT
M97-24288	NoP	AJOEN95	N10
1/8/97	,	ORACLE	
M97-24289	NoP	230419	N45
00/00/00			
M96-22758	NoP		
00/00/00			
M96-22875	NoP		
00/00/00			
M96-23636	NoP		
00/00/00			
M96-23639	NoP		
00/00/00	*****************************		
M96-23704	NoP		
4 1111			

FIG. 148 A

Item sold Description / Mfr	Qty	Mfr/Vendor I	N Vendor /C
VECTRA VL5 DT 5/166 MMX 16MB M2500			Meris :1
HP PC'S	1	27809	6123589
TRNSCVR MICRO MOD 1085		MIL4340M	Merisel
DIGI	1	62704	05517214
APEX 4.6GB PCI INT 5.25HH SCSI2 4.5MB	17MS W/SCS	I I APEX4.6GBPCI	TECHDATA
PINNACLE MICRO	1	630172	8791827
OMDR 4.6GB OPTL MED REWRITABLE		OMDR 4.6 GB	Merisel
PINNACLE	2	7 <b>97</b> 69	05582632
PC-TRAC PS/2 TRACKBALL		PD-250	MicroD
MICROSPEED INC.	2	256226	50-81179
RECORD ABLE BLANK CD 650MB 4X 1PK 74	MINUTES	CDQ-74A	MicroD
SONY CORPORATION OF AMERICA	20	314732	
ASERJET TONER 4 4M 4PLUS 4M PLUS YII	ELD-6800 PA	G 92298A	Merisel
HP PRINTERS	2	40901	05517214
3-PORT 10BT ETH HUB		MIL4710H	Merisel
OIG1	1	02223	05517214
DDQ-74SZ RECORDABLE10-PK SILK SCREEN	I COMPATIBLE	E CDQ-74SZ	TECHDATA
SONY MEDIA	1	803339	5591827
S-120 DRIVE 3.5HH 120MB READ/WRITEA	BLE TO 1.441	M 185061-001	MicroD
COMP AQ COMPUTER CORPORATION	1	437119	8400326
ASERJET 5SI 5SIMX TONER CARTRIDGE		C3909A	TECHDATA
HP PRINTERS	1	546065	5591827
LT COMPACTAPE HIXT 30GB 7PK		39-1050-11	TECHDATA
ADIC	1	048400	7384066
Z135 135MB CARTRIDGE SNGL PK HARD D	ISK CART FO	R S107793/S013	5 TECHDATA
SYQUEST	10	789369	5591827

FIG. 148 B

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FIG. 148 C

FIG. 149

FIG. 149 A	FIG. 149 B	FIG. 149 C
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414/437

MYS date	Mega PO	Cust Name /BO	8_ T P	O Item sold Description / Mfr
10/2/97	· icya i o	UNION BANK OF C	AL IEODALA	
M97-25641	NoP	6310009524	N10	VECTRA VL5 DT 5/166 MMX 16ME HP PC'S
1/8/97	•••••	ORACLE		TRNSCVR MICRO MOD 1085
M97-24289	NoP	230419	N45	DIGI
00/00/00	***************************************			APEX 4.6GB PCI INT 5.25HH SCSI2
M96-21656	NoP			PINNACLE MICRO
00/00/00	····×······			OMDR 4.6GB OPTL MED REWRITABL
M96-21656	NoP			PINNACLE
1/8/97	••••	Goldman, Sachs		PC-TRAC PS/2 TRACKBALL
M97-24287	NoP	S0108C820	N30	MICROSPEED INC.
00/00/00				RECORD ABLE BLANK CD 650MB 4X
M96-22125	NoP			SONY CORPORATION OF AMERICA
1/8/97		PACIFIC BELL BAY	/ UNIT	LASERJET TONER 4 4M 4PLUS 4M I
M97-24288	NoP	AJOEN95	N10	HP PRINTERS
1/8/97	·····	ORACLE		8-PORT 10BT ETH HUB
M97-24289	NoP	230419	N45	DIGI
00/00/00				CDQ-74SZ RECORD ABLE 10-PK SILK
M96-22758	NoP			SONY MEDIA
00/00/00 M96-22875	····			LS-120 DRIVE 3.5HH 120MB READ
	NoP			COMPAQ COMPUTER CORPORATION
00/00/00: M96-23636	:ND			LASERJET 5SI 5SIMX TONER CARTE
	NoP			HP PRINTERS
00/00/00 196-23639				DLT COMPACTAPE HIXT 30GB 7PK
	NoP			ADIC
00/00/00 196-23704			······	EZ135 135MB CARTRIDGE SNGL PK
<b>◆</b>	אַאַאַ	<u>:                                      </u>	<u>:</u>	SYOUEST

FIG. 149 A

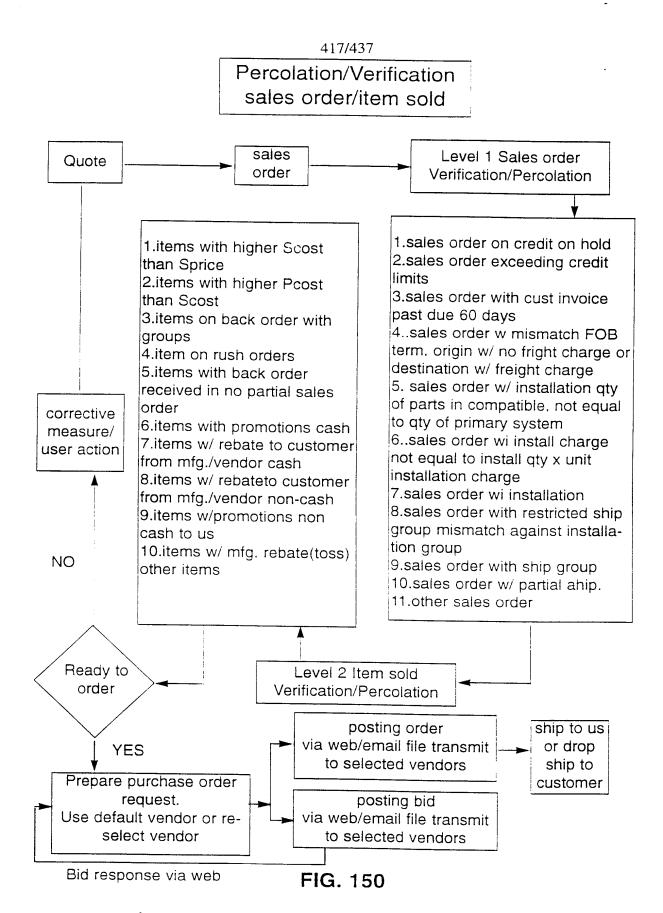
415/437

0.1			:
Qty	Mfr/Vendor PN	Vendor/Conf	Order/Re
12500 24XCD WFW W	D4594B#ABA	Merisel	10/2/97
	27809	6123589	
	MIL4340M	Merisel	1/8/97
1	62704	05517214	
5MB 17MS W/SCSI	APEX4.6GBPCI	TECHDATA	1/21/97
1	630172	8791827	
	OMDR 4.6 GB	Merisel	2/3/97
2	79769	05582632	
	PD-250	MicroD	1/9/97
2	256226	50-81179	
PK 74 MINUTES	CDQ-74A	MicroD	2/10/97
20	314732	i nor ob	2/10/3/
US YIELD-6800 PAG	000004	:	:
2	40901	Merisel	1/8/97
:4	:40901	05517214	
······································	MIL4710H	Merisel	1/8/97
1	02223	05517214	
CREEN COMPATIBLE	CDQ-74SZ	TECHDATA	8/15/96
1	803339	5 <b>5</b> 91827	
RITEABLE TO 1.44M	185061-001	MicroD	1/8/97
1	<b>4371</b> 19	8400326	
GE	C3909A	TECHDATA	1/21/97
1	546065	5591827	
	39-1050-11	TECHDATA	10/8/96
	·÷·····	7384066	10/0/30
1	048400		
1 ARD DISK CART FOR	048400 \$107793/\$Q135		1/21/97

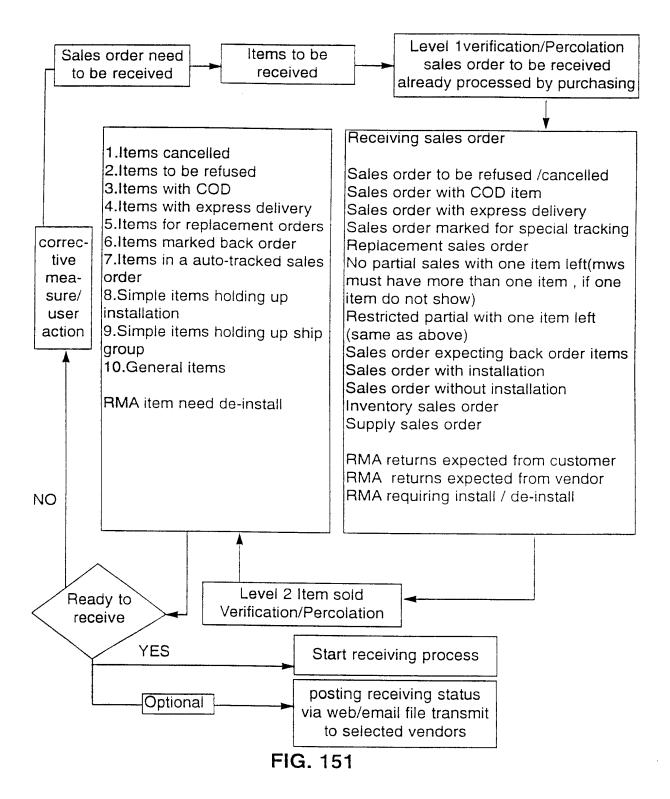
FIG. 149 B

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Ship Group	Scomments	Ŀ
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FIG. 149 C

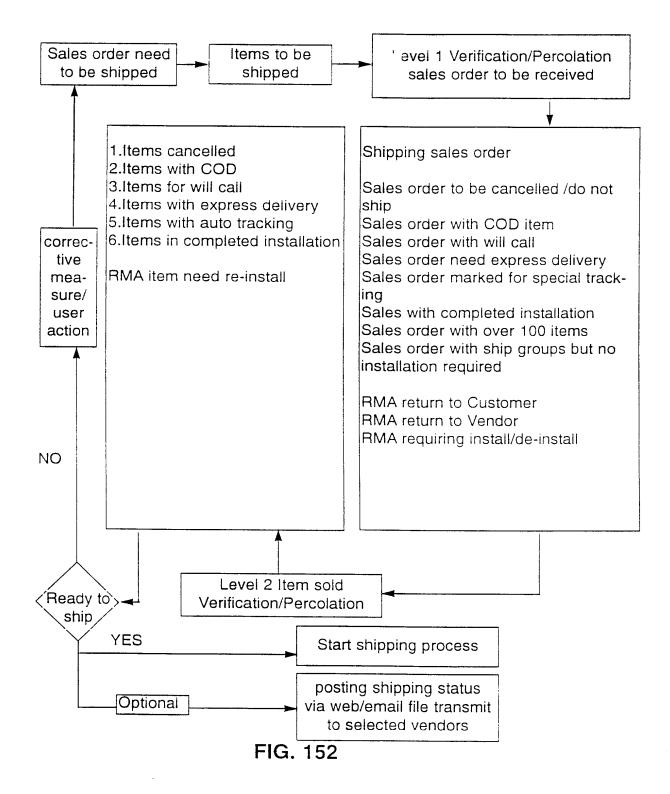


# Percolation/Verification Receiving



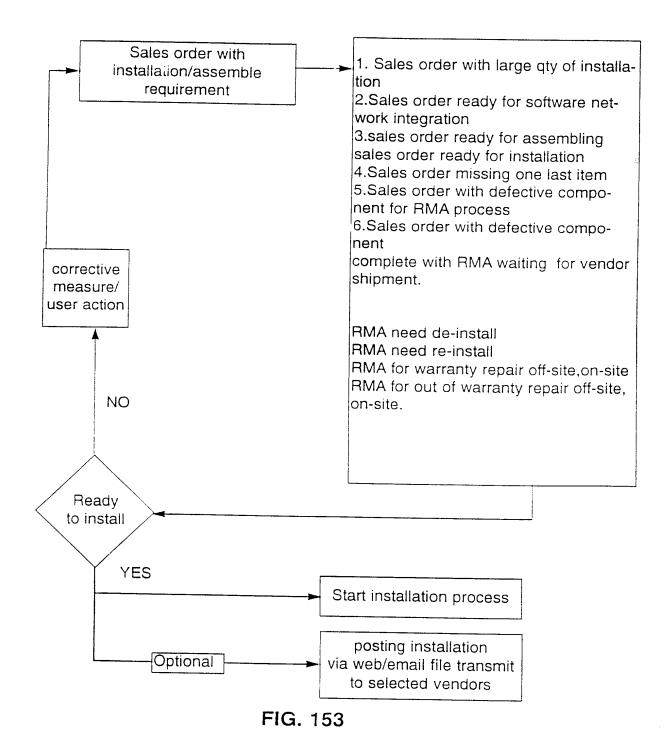
#### 419/437 tion/Verifica

## Percolation/Verification Shipping



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### Percolation/Verification Installation/Assemble



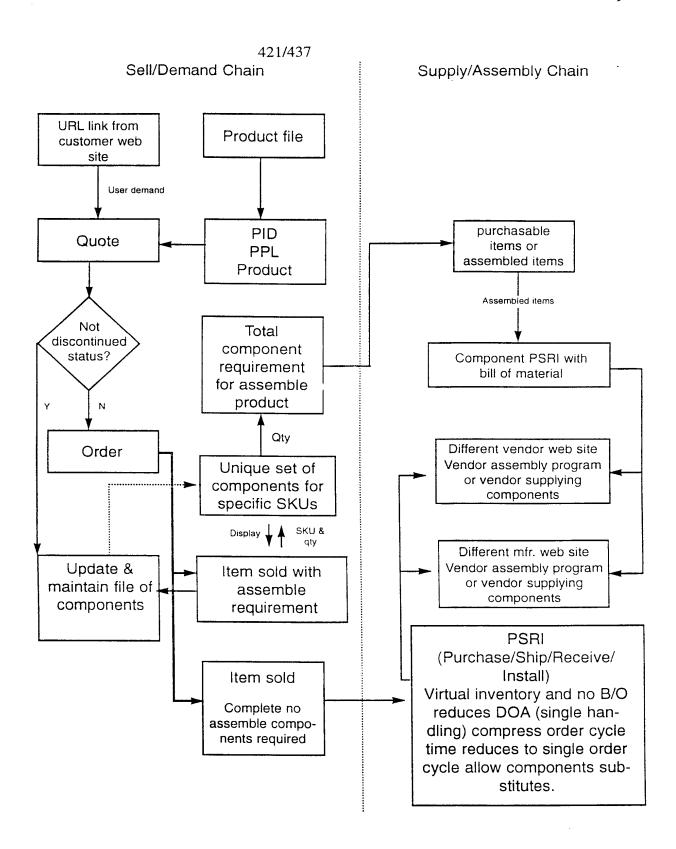


FIG. 154

			· · · ·			44214	157							
Cust. Business Activities	Busiest Period Week Month		Slowest Period Week Month										Digital file	Activate
Cust. Access group	Supervisor Access List name	1.	Universal Access	Individual Access									Digital file	Activate
Cust. Security	Self	Vendor	Encryption	SET	Security Certificate	VPN	Inside Firewall						Digital file	Activate
Cust. Payment	Retrieve	Credit card	Cr. card frequency limit	Cr. card \$ limit	Check	£ limit	Weekly	Daily	Monthly				Digital file	Activate
Cust. Cr. memo	Issued Internal External												Digital file	Activate
Cust. Invoice	Retrieve	Fax	Mail	Web download	Cr. apply to inv.	Replace invoice	Frequency Weekly Daily						Digital file	Activate
Cust. Tracking	Serial #	\$ limit Per tracking	Duration	Qty limit Per tracking									Digital file	Activate
Cust. Shipping	Method UPS FedEx	AirBorne Truck	Pick up	Hand Carry	Deliver with- in building	Drop Ship	Destina- tion	Origin	Loading Dock	Packing slip	Partial	Label Detait general	Digital file	Activate
Cust. Service & Repair	On-site	Off-site	Labor S on site	Labor S off site	Part stock	Part charge	Duration 2, 4, 8, 2± 48, 72 hrs	Service contrac:	1, 2, 3 yr				Digital file	Activate
Cust. RMA	Create	Save/ retrieve	Modify	Submit	\$ limit Per RMA	Qty limit Per day	Frequency limit RMA/day	Standard guide	Auto approved	Packing slip			Digital file	Activate
Cust. Report	RMA customer not shipped	RMA cust.not	RMA summary	PO summary	B/O summary	Tracking report	Period limit	Qty report	Ship report	Rec'd report	Acct. invoice	Payment	Digital file	Activate
Cust. Order	Place	3.	Adden- dum	2.	Retrieve	1. 2. 3.	Cancel	\$ limit Per order	Oty limit Per day	Frequency limit Order/day	Tracking order Per month	Eval	Digital file	Activate
Cust. Quote	Create	3.	Save/ retrieve	3.	Modify	3.	Submit	\$ limit per quote	Oty limit Per day	Frequency limit Quote/day	Archive limit Per month	Eval	Digital file	Activate
Cust. Price update	Frequency Daily	Weekly 2.	Monthly	Minimum \$ update \$	Show new product	Show discount product	Pricing update	Cost plus Fixed price	mfr. specific	Show all product	PPL	PID	Digital file	Activate
Task	Corporate Y/N selection													

FIG. 155

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Vendor Business Activities	Busiest Period Week Month		Slowest Period Week Month										Digital file	Activate
Vendor Access group	Supervisor Access List name	1. 2. 3.	Universal Access	Individual Access									Digital file	Activate
Vendor Security	Self	Vendor	Encryption	SET	Security Certificate	VPN	Inside						Digital file	Activate
Vendor Payment	Retrieve	Credit	Cr. card frequency limit	Cr. card \$ limit	Check	EFT \$ limit	Weekly	Daily	Monthly				Digital file	Activate
Vendor Cr.	Issued Internal External												Digital file	Activate
Vendor	Retrieve	Fax	Mail	Web download	Cr. apply to inv.	Replace invoice	Frequency Weekly Daily						Digital file	Activate
Vendor Tracking	Serial #	\$ limit Per tracking	Duration	Oty limit Per tracking									Digital file	Activate
Vendor Shipping	Method UPS FedFx	AirBorne Truck	Pick up	Hand Carry	Deliver with- in building	Drop Ship	Destina- tion	Origin	Loading Dock	Packing slip	Partial	Label Detail general	Digital file	Activate
Vendor Service & Repair	On-site	Off-site	Labor \$ on site	Labor \$ off site	Part stock	Part charge	Duration 2, 4, 8, 24, 48, 72 hrs	Service contract	1, 2, 3 yr				Digital file	Activate
Vendor RMA	Create	Save/ retrieve	Modify	Submit	\$ limit Per RMA	Oty limit Per day	Frequency limit RMA/day	Standard guide	Auto approved	Packing slip			Digital file	Activate
Vendor Report	RMA customer not shipped	RMA cust.not	RMA summary	PO summary	B/O summary	Tracking report	Period limit	Oty report	Ship report	Rec'd report	Acct. invoice	Payment	Digital file	Activate
Vendor Order	Place	2.	Adden- dum	3.	Retrieve	1 2 3.	Cancel	\$ limit Per order	Qty limit Per day	Frequency limit Order/day	Tracking order Per month	Eval	Digital file	Activate
Vednor Quote	Create	3.2.	Save/ retrieve	3.	Modify	3.	Submit	\$ limit per quote	Oty limit Per day	Frequency limit Quote/day	Archive limit Per month	Eval	Digital file	Activate
Vendor Price update	Frequency Daily	Weekly	Monthly	Minimum \$ update \$	Show new product	Show discount product	Pricing update	Cost plus Fixed price	mfr. specific	Show all product	PPL	PID	Digital file	Activate
Task	Corporate Y/N selection													

FIG. 156

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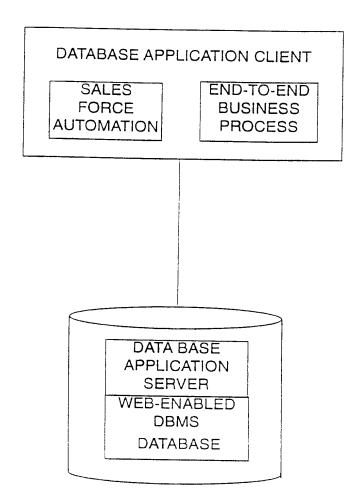


FIG. 157

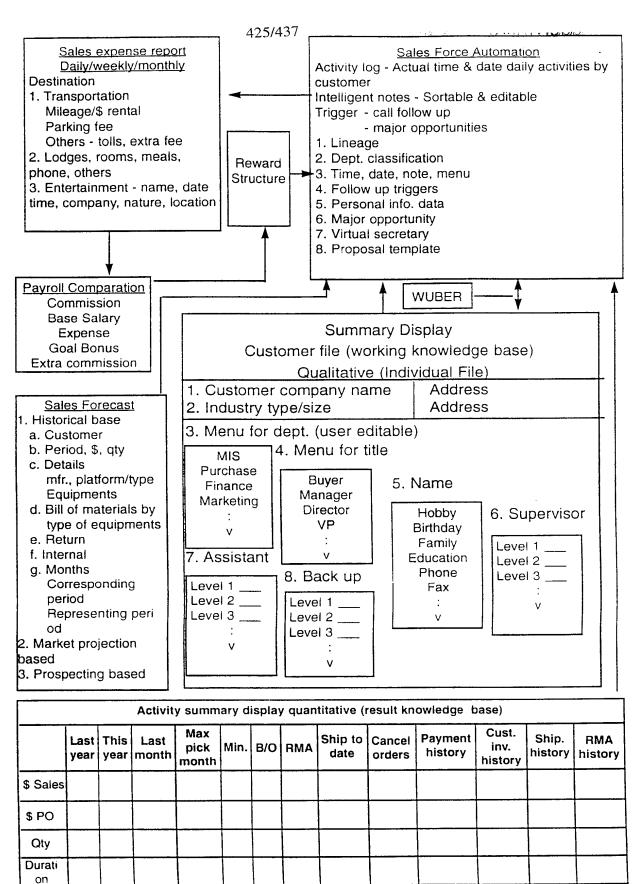


FIG. 158

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FIG. 159

FIG. 159A

FIG. 159B

FIG. 159C

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	וורמווווזף בומחר אמקר ווב	
Type	SubType	Condition
Exchange	Exchange different product	Original Product Not Opened
Exchange	Exchange different product	Original Product Opened No Box Left
Exchange	Exchange different product	Original Product Opened Not Used
Exchange	Exchange different product	Original Product Opened Used
Exchange	Exchange same product	Not Opened
Exchange	Exchange same product	Opened No Box Left
Exchange	Exchange same product	Opened Not Used
Exchange	Exchange same product	Opened Used
Never been shipped	Inventory	Transfer to other orders
Never been shipped	Wrong product received	Keep in inventory
Never been shipped	Wrong product received	Ship back to vendor
Other	Other	Other
Repair/replace	Out of Warranty	Depot parts required
Repair/replace	Out of Warranty	Depot service only

FIG. 159 A

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Repair/replace	Out of Warranty	On site parts required
Repair/replace	Out of Warranty	On site service only
Repair/replace	Under Warranty	Depot parts required
Repair/replace	Under Warranty	Depot service only
Repair/replace	Under Warranty	On site parts required
Repair/replace	Under Warranty	On site service only
Return for credit	Credit card	Not Opened
Return for credit	Credit card	Opened No Box Left
Return for credit	Credit card	Opened Not Used
Return for credit	Credit card	Opened Used
Return for credit	Credit memo	Not Opened
Return for credit	Credit memo	Opened No Box Left
Return for credit	Credit memo	Opened Not Used
Return for credit	Credit memo	Opened Used
		-

FIG. 159 B

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Shipping related Shipping related Shipping related Shipping related Diamonal Shipping related Shipping related Diamonal Shipping related	Damaged Damaged Damaged Damaged Duplicate shipment	Coming back to us  Directly back to vendor  Need repair  Will hold until replacement  Coming back to us  Directly back to vendor
pa pa pa		Directly back to vendor Need repair Will hold until replacement Coming back to us Directly back to vendor
pa pa		Need repair Will hold until replacement Coming back to us Directly back to vendor
pa		will hold until replacement Coming back to us Directly back to vendor
pa		Coming back to us Directly back to vendor
		Directly back to vendor
Shipping related Di	Duplicate shipment	
Shipping related Di	Duplicate shipment	Will issue new PO
Shipping related	Lost	File claim by customer
Shipping related	Lost	File claim by Mega Network
Shipping related Lo	Lost	File claim by vendor
Shipping related Re	Refused	Coming back to us
Shipping related Re	Refused	Directly back to vendor
Shipping related W	Wrong Address	Coming back to us
Shipping related W	Wrong Address	Directly back to vendor

FIG. 159 C

Fig. 16(

Fig.160A

							Customers: M	Σ
Com	pany Price List	e List						11
Company Nam UNION BANK OF C	e: CALIFORNIA				Compan	Company Code:	Seq8: Sales Re	R.
Defaults 🔲	to Mfg URLs	S     Web User	ser	+	Authorize	Authorized Personnel	1155 Charles Employee N	ج ای
Price Base M AvgCost	arkUP 4.5%	ola ⊠	Update Prices	Edit			MNp1277	1 1
+ Display	List	Search	Clean Up	ال	LINDA CHEUNG	NG	MNp1275	I
Sort	List A	Apply	Export/Print		CHARLES WONG	ONG	11111	1
Part Number	Manuf	ا ا	Price Bac	Price Basis Mart 10 Addr	Adr Robert Walters	ers	MNp1271	 
H0004				4 IBI 1 C	Avail Spec Web URI	eb URL		
	36.00 HPS SIMULA	MULA	AvqCo	AvaCost 2.5%	2Daus	***************************************		 !
BE100/10								
	95.00 BOCA RESEARCH	RESEARCH	AvaCo	AvaCost 4 598	20216			·-·
PC-PA2411U	UNIVER	SAL AC AD AF	UNIVERSAL AC AD APTER T1850C T4500 AND T4600	4500 AND 746	28.25			 
	30.00 TOSHIB	80.00 TOSHIBA AMERICA INF	4F AVQCo	AvaCost 4.5%	2Dalls	•••••••••••••••••••••••••••••••••••••••	***************************************	
H0003					: 66.52			<u>.</u>
	36.00 HPS SIMULA	TULA		AvaCost 25%	20316		***************************************	·-·
SVGP64					2,000			 I
13	O.00 BOCA RESEARCH		AvqCos	AvgCost 4.5%	2Daus	***************************************		- · — ;
PA2413URA	BATTER	RY PACK NICK	BATTERY PACK NICKEL HYDRIDE FOR T4500, T4600	T4500, T460	3			. <u> </u>
	5.00 TOSHIB,	195.00 TOSHIBA AMERICA INF	F AvgCos	AvgCost 4.5%	2Daus		***************************************	 :
H5490A	•							 I
52	521.00 HEWLETT P3	T P3	AvgCos	AvgCost 2.5%	2Daus			·-· :
ВМСР01								
	4556/4556		# # # # # # # # # # # # # # # # # # #	<b>1</b>				
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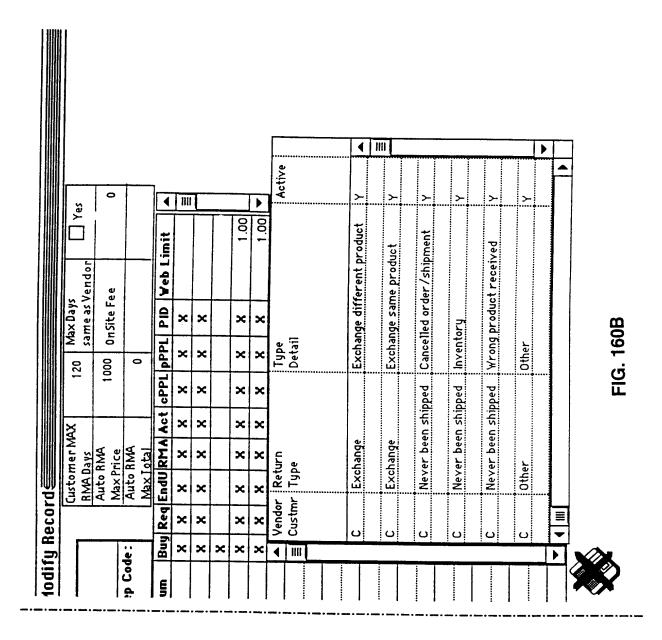


Fig. 161

Fig.161A	Fig.161B
Fig.161C	Fig.161D

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Sun	Mon	Tue	Wed			ber 1998		Go T	o Today	199
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8	19	10		<u> </u>			29	30	1	2
	<u> </u>		ļ	12	13	114	6	7	8	9
15	16	17	18	19	20	21	13	14	15	16
22	23	24	25	26	27	28	20	21	22	23
29	30	1	2	3	4	5	27	28	29	30
<u>-</u>		<del></del>						i,	····	

FIG. 161A

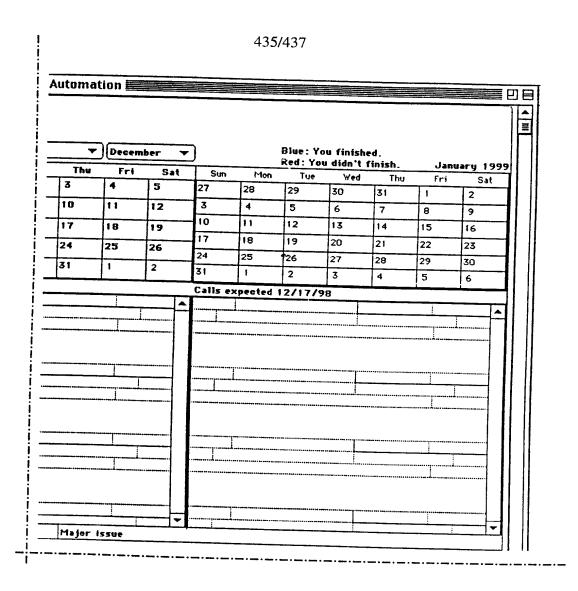


FIG. 161B

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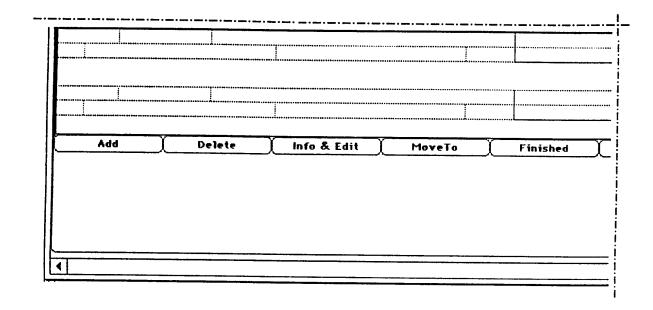


FIG. 161C

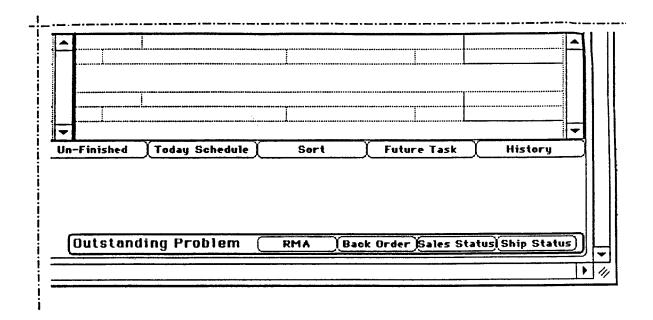


FIG. 161D

## INTERNATIONAL SEARCH REPORT

International application No. PCT/US98/27496

A. CLAS	SSIFICATION OF SUBJECT MATTER		•				
IPC(6) :G06F 17/60, 15/46; G06K 5/00 US CL :705/34; 235/380; 364/468.02							
	US CL :705/34; 235/380; 364/468.02 According to International Patent Classification (IPC) or to both national classification and IPC						
<del>-</del>	DS SEARCHED						
Minimum documentation searched (classification system followed by classification symbols)							
	U.S. : 705/34; 235/380; 364/468.02						
Documentati	ion searched other than minimum documentation to the e	extent that such documents are included in	n the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  APS  international science singular unbroken undivided database web internet electronic commerce business trade industry							
integration, merging, single, singular, unbroken, undivided, database, web, internet, electronic, commerce, business, trade, industry							
C. DOC	UMENTS CONSIDERED TO BE RELEVANT						
Category*	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.				
Y	US 5,621,201 A (LANGHANS et al.) 114-23	15 April 1997, col. 16, lines	1-79				
Y US 5,311,438 A (SELLERS et al.) 10 May 1994, col. 70, lines 30- 37, 48-52; co l. 71, lines 1-7.							
ļ							
		:					
Furth	her documents are listed in the continuation of Box C.	See patent family annex.					
• Sp	pecial categories of cited documents:	"T" later document published after the int	ernational filing date or priority				
	ocument defining the general state of the art which is not considered be of particular relevance	date and not in conflict with the app the principle or theory underlying th	e invention				
	rlier document published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be considered when the document is taken alone					
cit							
	ocument referring to an oral disclosure, use, exhibition or other eans	combined with one or more other suc being obvious to a person skilled in	ch documents, such combination				
	ocument published prior to the international filing date but later than be priority date claimed	"&" document member of the same pater					
Date of the	e actual completion of the international search	Date of mailing of the international se					
02 MAR	CH 1999	<b>09</b> APR 19	99				
Name and Commissi	mailing address of the ISA/US oner of Patents and Trademarks	Authorized officer					
Box PCT	on, D.C. 20231	RAQUEL ALVAREZ SMY	and som				
	No. (703) 305-3230	Telephone No. (703) 305-2200					